85-1529

No.

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In The Supreme Court of the United States

OCTOBER TERM, 1985

GRUMMAN AEROSPACE CORPORATION
Petitioner,

v.

EDWIN LEES SHAW,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS, ELEVENTH CIRCUIT

Petition For Writ of Certiorari

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QUESTIONS PRESENTED FOR REVIEW

I. IS THE SEPARATION OF POWERS DOCTRINE VIOLATED, IN A SUIT FOR INJURY OR DEATH TO A SERVICEMAN IN THE PERFORMANCE OF HIS DUTY, WHEN THE JUDICIARY SECOND-GUESSES UNITED STATES MILITARY DECISIONS APPROVING THE DESIGN OF MILITARY WEAPONS SYSTEMS?

II. IN SUCH A SUIT, SHOULD THE JUDICIARY EVALUATE AND PASS JUDGMENT ON THE COMPETENCE OF THE MILITARY IN APPROVING THE DESIGN OF A MILITARY WEAPONS SYSTEM IT HAS SELECTED FOR USE?

III. SHOULD A MILITARY CONTRACTOR BE HELD LIABLE FOR ALLEGED DEFECTS IN THE DESIGN OF A MILITARY WEAPONS SYSTEM WHICH DESIGN WAS APPROVED BY THE UNITED STATES MILITARY?

IV. DOES THE RECORD IN THIS CASE ESTABLISH THE ELEMENTS OF THE MILITARY CONTRACTOR DEFENSE?

PARTIES TO THE PROCEEDINGS BELOW

All parties to the proceedings below subject to this petition for writ of *certiorari* are set forth in the caption of the case.

RULE 28.1 LISTING

Grumman Aerospace Corporation, its parent corporation, Grumman Corporation, and all subsidiaries of Grumman Corporation and Grumman Aerospace Corporation: Grumman Houston Corporation, Grumman St. Augustine Corporation, Grumman Technical Services, Inc., Grumman Allied Industries, Inc., Grumman Emergency Products, Inc., Grumman Credit Corporation, Grumman Data System Corporation, Grumman-CTEC, Inc., Grumman Data Information Services, Inc., CallData Systems Development, Inc., ISI Systems, Inc., Grumman International, Inc., Grumman Ohio Corporation, Grumman Export Sales Corp., Paumanock Development Corporation, Farmhouse Dining Services, Inc., Paumanock Insurance Company Ltd., Grumman (Singapore) Private Limited, Grumman Ventures, Inc., Tachonics Corporation.

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OPINIONS IN THE COURTS BELOW

The opinion of the Eleventh Circuit Court of Appeals was issued on December 19, 1985 under the caption *Shaw v. Grumman Aerospace Corporation,* No. 84-5083. The opinion appears at 778 F.2d 736 (11th Cir. 1985), and is reproduced in Appendix 1 attached hereto.

The Findings of Facts and Conclusions of Law of the United States District Court for the Southern District of Florida were issued on September 12, 1984 under the style *Shaw v. Grumman Aerospace Corporation,* Case No. 81-2295-Civ-ARONOVITZ. The opinion appears at 593 F.Supp. 1066 (S.D. Fla. 1984), and is reproduced in Appendix 2 attached hereto.

STATEMENT OF GROUNDS OF JURISDICTION

The judgment of the United States Court of Appeals for the Eleventh Circuit was entered on December 19, 1985. A writ of *certiorari* is sought from this Court pursuant to the provisions of 28 U.S.C. § 1254(1).

CONSTITUTIONAL PROVISIONS AND STATUTES

1. U.S. Constitution Art. 1, Section 8, Clauses 11-14:

> SECTION 8. The Congress shall have Power
>
> . . .
>
> To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;
>
> To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years;
>
> To provide and maintain a Navy;
>
> To make Rules for the Government and Regulation of the land and naval Forces
>
> . . . .

2. U.S. Constitution Art. 2, Section 2, Clause 1:

SECTION 2. The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual Service of the United States; he may require the Opinion, in writing, of the principal Officer in each of the executive Departments, upon any Subject relating to the Duties of their respective offices, and he shall have Power to grant Reprieves and Pardons for Offenses against the United States, except in Cases of Impeachment.

3. Federal Tort Claims Act, 28 U.S.C. § 2674:

§ 2674. Liability of United States

The United States shall be liable, respecting the provisions of this title relating to tort claims, in the same manner and to the same extent as a private individual under like circumstances, but shall not be liable for interest prior to judgment or for punitive damages.

If, however, in any case wherein death was caused, the law of the place where the act or omission complained of occurred provides, or has been construed to provide, for damages only punitive in nature, the United States shall be liable for actual or compensatory damages, measured by the pecuniary injuries resulting from such death to the persons respectively, for whose benefit the action was brought, in lieu thereof.

4. Federal Tort Claims Act, 28 U.S.C. § 2680:

§ 2680. Exceptions

The provisions of this chapter and section 1346(b) of this title shall not apply to —

. . .

(j) Any claim arising out of the combatant activities of the military or naval forces, or the Coast Guard, during time of war.

STATEMENT OF THE CASE

On September 12, 1979, an accident occurred approximately 100 miles off the coast of San Diego. A KA-6D aircraft, the tanker version of the U.S. Navy's (hereinafter the "Navy") A-6 jet attack aircraft weapons system (hereinafter "the weapons system"), piloted by Lt. J.G. Gary Scott Shaw crashed into the ocean immediately after having been catapult-launched from the aircraft carrier U.S.S. Constellation. Lt. Shaw was piloting the weapons system on a military mission for the Navy. Record at 700 (hereinafter "R. ").

Lt. Shaw's personal representative, Edwin Lees Shaw, filed suit under the Death on the High Seas Act, 46 U.S.C. §§ 761, *et seq.* The suit sought damages from Grumman claiming that the death of a military serviceman in the line of duty was caused by a design defect in a military weapons system.

Petitioner Grumman Aerospace Corporation (hereinafter "Grumman") developed the weapons system jointly with the Navy in the late 1950's. R. 707-708; Transcript at 1-134 (hereinafter "T. "); T. 2-119, 2-162, 3-6. Its mission *as defined by the Navy* in its Detail Specifications for Model A-6A(A2F-1) Airplane (Plaintiff's Exhibit 6) is

> the destruction of enemy targets such as enemy installations including aircraft and submarines at their bases, ships, shipyards, ports and port facilities, as well as direct support for ground operations.

The weapons system was developed on the cutting edge of military technology, and is the only weapons system in the United States military arsenal that is an all-weather low-level attack aircraft. T. 2-136 to 137. It has one of the largest flight envelopes[1] of any aircraft weapons system in

1. The weapons system under any weather conditions can take off from an aircraft carrier and fly at low to extremely high speeds

the United States military, and is required to maneuver to perform its mission in a manner impossible for commercial transport aircraft. T. 3-121 to 122, 3-80.

Grumman worked on a daily basis with the Navy to develop detailed design specifications on all aspects of the weapons system. T. 3-6 to 3-7, 3-89, 2-166, 2-168; Plaintiff's Exhibit 6; Defendant's Exhibit 4. The specifications and detailed drawings for each system of the aircraft were required to be submitted to the Navy for review and approval and were approved by the Navy. T. 3-12 to 3-17; Defendant's Exhibit 3. As prototypes of the weapons system were produced, both Grumman and the Navy tested them. T. 3-19. The Navy determined that the weapons system met all its requirements and specifications. T. 2-120.

Having logged over two million flight hours, including extensive combat action in the Vietnam war, the weapons system remains the backbone of the Navy's fleet of carrier-based attack aircraft. T. 2-136, 3-3.

The decision of the United States District Court for the Southern District of Florida questioned the judgment of the Navy as to its requirements for weapons systems and the appropriateness of the A-6 to meet those requirements. The court held that the weapons system—which is still being procured and used by the Navy today[2]—is unreasonably dangerous in that it does not contain a backup longitudinal flight control system,[3] even though the weapons system was approved and accepted by the Navy, and even

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and low to high altitudes to destroy enemy targets. T. 3-79. It can fly anywhere from ground level (500 feet) to approximately 40,000 feet at any speed from 130 knots to 600 knots. T. 3-121 to 122.

2. An order was placed by the Navy for the A-6E weapons system as recently as April 30, 1985.

3. The longitudinal flight control system controls the ability of the aircraft to ascend and descend. The A-6E recently ordered by

though no other attack aircraft currently in use in the U.S. military has such a backup system. T. 2-43. The United States Court of Appeals for the Eleventh Circuit affirmed the district court, and created a radically new review procedure under which decisions of the United States military as to the appropriate equipping of its forces can be questioned, reviewed and reversed by the courts. Petitioner seeks a writ of *certiorari* from this Court to review the military decision-making by the Southern District of Florida and the Eleventh Circuit Court of Appeals.

ARGUMENT

I. INTRODUCTION.

This Court has held on many occasions, most recently in *United States v. Shearer,* U.S. , 105 S.Ct. 3039 (1985), that the "complex, subtle, and professional decisions as to the composition, training, equipping, and control of a military force are essentially professional military judgments, subject *always* to civilian control of the Legislative and Executive Branches." *Gilligan v. Morgan,* 413 U.S. 1 at 10, 93 S.Ct. 2440 at 2446 (1973) (emphasis in original), quoted in *U.S. v. Shearer, supra* at 3044. This Court also has emphasized on many occasions the importance of uniformity in law applicable to and affecting the relationships between the government and its suppliers of ordnance and soldiers. "The relationship between the Government and its suppliers of ordnance is certainly no less 'distinctively federal in character' than the relationship between the Government and its soldiers." *Stencel Aero Engineering Corp. v. U.S.,* 431 U.S. 666 at 672, 97 S.Ct. 2054 at 2058 (1977). Petitioner seeks a writ of *certiorari* to review a decision of the Eleventh Circuit which contravenes the above principles so often enunciated by this Court in that, in conflict with all other circuits which have

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the Navy contains essentially the same longitudinal flight control system without a backup.

addressed the issue, it establishes a subjective judicial review procedure for decisions of command by and qualifications of the military. (The Eleventh Circuit test is discussed more fully at p. 5, *infra*.)

II. Certiorari Should Be Granted to Resolve a Conflict Between The Eleventh Circuit Court of Appeals and Four Other Circuits Regarding The Liability of Military Contractors For Alleged Design Defects In Military Weapons Systems.

The central question in this case—whether decisions by the United States military concerning the design and selection of its weapons systems should be second-guessed by the judiciary in suits against military contractors for alleged design defects in such systems—has been addressed by five of the circuit courts of appeal. Four of the circuit courts—the Ninth, Third, Fifth and Seventh—have correctly followed the dictates of this Court concerning deference to be given to such military decision-making. Those courts uniformly followed the holding enunciated by the Ninth Circuit Court of Appeals in *McKay v. Rockwell International Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043, 104 S.Ct. 711 (1984). *McKay* held that a contractor that produces military equipment pursuant to a contract with the government is insulated from liability for alleged design defects in the equipment if:

> (1) the United States is immune from liability under *Feres* and *Stencel*, (2) the supplier proves that the United States established, or approved, reasonably precise specifications for the allegedly defective military equipment, (3) the equipment conformed to those specifications, and (4) the supplier warned the United States about patent errors in the government's specifications or about dangers involved in the use of the equipment that were known to the supplier but not to the United States.

Id. at 451; *accord, Koutsoubos v. Boeing Vertol,* 755 F.2d 352 (3d Cir. 1985) *cert. denied,* U.S. , 106 S.Ct. 72 (1985); *Schoenborn v. The Boeing Co.,* 769 F.2d 115 (3d Cir. 1985) *cert. denied sub.nom. Eschler v. Boeing Co.,* U.S. , 106 S.Ct. 851 (1986); *Bynum v. FMC Corp.,* 770 F.2d 556 (5th Cir. 1985); *Tillett v. J.I. Case Co.,* 756 F.2d 591 (7th Cir. 1985).

The Eleventh Circuit Court of Appeals in this case expressly rejected the *McKay* test. It announced that it would determine the liability of a military contractor "differently from other circuits that have considered this question," *Shaw v. Grumman Aerospace Corp.,* 778 F.2d 736 at 738, (11th Cir. 1985). It then proceeded to formulate a new test for the military contractor defense which turns "the assumption behind the *McKay* test on its head." *Id.* at 746. Although the Eleventh Circuit noted the need for deference to military decisions, it wrongly injected the judiciary into the military decision-making process by the new test it announced. Under the Eleventh Circuit's test, the military contractor must either choose not to participate or to participate only minimally in the design, or be prepared to show, over and above the elements of the *McKay* test, that (a) it timely warned the military of all risks of the design and notified the military of all alternative designs known by or which reasonably should have been known by the contractor *and* (b) the military, although forewarned, clearly and knowingly authorized the dangerous design. *Id.* at 745-746. The *Shaw* version of the military contractor defense violates the separation of powers doctrine and the deference which this Court has said should be given to these types of military decisions.

In *Stencel, supra* and in *Feres v. U.S.,* 340 U.S. 135, 71 S.Ct. 153 (1950), this Court decreed that "it makes no sense to permit the fortuity of the situs of the alleged negligence to affect the liability of the Government to a serviceman who sustains service-connected injuries," and that

"it makes equally little sense to permit that situs to affect the Government's liability to a Government contractor for the identical injury." *Stencel Aero Engineering Corp. v. U.S.*, 431 U.S. 671 at 672, 97 S.Ct. 2054 at 2058. Thus, this Court mandated that military matters be governed by unified federal law, and not be subject to different legal standards in different parts of this country.

Until the Eleventh Circuit's opinion in this case, there was a uniform test for the application of the military contractor defense. However, the Eleventh Circuit Court of Appeals formulated a completely different test for the military contractor defense, and created a conflict among the circuits which must now be resolved by this Court if the Court's clear mandate is to be followed uniformly. Unless this Court resolves the conflict, and commands uniformity, military contractors sued in the Eleventh Circuit will be subject to a standard of liability which is different from and far more restrictive than the standard applicable in the rest of the country.

Since military contractors can be sued in any circuit, plaintiffs will have an option to "circuit shop" and escape the uniform standard of other circuits and opt for a favorable standard in the Eleventh Circuit. *Certiorari* should be granted by this Court in order to unify for all circuits the standard in the important and uniquely federal issue of military contractor liability. The Eleventh Circuit in its opinion correctly states that the Supreme Court has not spoken on this issue, and clearly invites this Court to resolve the conflict and give the guidance sought in this petition.

III. Certiorari Should Be Granted To Resolve The Important Question of Whether The Judiciary Should Second-Guess The Judgment of The United States Military In Approving The Design of A Military Weapons System It Has Selected For Use.

The tests of the military contractor defense recognized by the circuit courts of appeal are grounded upon the separation of powers between the executive and judicial branches of the United States Government. The Constitution of this country clearly rests responsibility for such military decisions in the executive and legislative branches of government. It specifies that "[t]he Congress shall have Power . . . To declare War . . . To raise and support Armies . . . To provide and maintain a Navy; To make Rules for the Government and Regulation of the land and naval Forces . . . ." Article 1, Section 8, Clauses 11-14. The Constitution also provides that "[t]he President shall be Commander in Chief of the Army and Navy of the United States . . . ." Article 2, Section 2, Clause 1. Decisions on preparing and equipping the armed forces therefore rest with the President and Congress, not the judiciary. *Schlesinger v. Ballard* 419 U.S. 498 at 510, 95 S.Ct. 572 at 578 (1975).

This Court's decisions in *Feres, supra* and *Stencel, supra* are

> best explained by the "peculiar and special relationship of the soldier to his superiors, the effects of the maintenance of such suits on discipline, and the extreme results that might obtain if suits under the Tort Claims Act were allowed for negligent orders given or negligent acts committed in the course of military duty."

U.S. v. Shearer, U.S. , 105 S.Ct. 3039 at 3043, quoting *U.S. v. Muniz,* 374 U.S. 150 at 162, 83 S.Ct. 1850 at 1858 (1963), quoting *U.S. v. Brown,* 348 U.S. 110 at

112, 75 S.Ct. 141 at 143 (1954). Suits affecting or implicating military decision-making are subject to the all important consideration of "whether the suit requires the civilian court to second-guess military decisions, [citations omitted] and whether the suit might impair essential military discipline . . . ." *U.S. v. Shearer, supra* at 3043.

As in the situation addressed by *Shearer, supra,* the standard for military contractor insulation from liability enunciated by the Eleventh Circuit in this case involves "complex, subtle, and professional decisions as to the . . . equipping . . . of a military force . . . ." *Gilligan v. Morgan,* 413 U.S. 1 at 10, 93 S.Ct. 2440 at 2446 (1973). The decision of whether or not to approve a design of a military weapons system as complex as the A-6 jet attack aircraft is such a professional military judgment. "By whatever name it is called, it is a decision of command. . . . [The plaintiff's claims are] the *type* of claims that, if generally permitted, would involve the judiciary in sensitive military affairs at the expense of military discipline and effectiveness." *U.S. v. Shearer, supra* at 3044 (emphasis in original). Such second-guessing of military judgment clearly conflicts with required deference to military decisions and should not be sanctioned.

In addition, the test enunciated by the Eleventh Circuit for the military contractor defense "would mean that commanding officers would have to stand prepared to convince a civilian court of the wisdom of a wide range of military . . . decisions . . . ." *U.S. v. Shearer, supra* at 3044. The Eleventh Circuit decision requires review by the judiciary of the adequacy of warnings and alternatives presented by the military contractor to the military, and a test of whether or not the military made an informed decision, taking "into account evidence that goes to the military's own level of relevant knowledge and expertise." *Shaw v. Grumman Aerospace Corp., supra* at 746. Such proof will require bringing into court military officers from the lowest

to the highest rank to show their level of knowledge concerning the design of complex weapons systems, their level of participation in discussions and decisions on the design, and their level of knowledge of risks in that design.

The judicial second-guessing of military decisions practiced by the courts below in this case is no more acceptable constitutionally than executive second-guessing of judicial decisions. "Orderly government requires that the judiciary be as scrupulous not to interfere with legitimate Army matters as the Army must be scrupulous not to intervene in judicial matters." *Orloff v. Willoughby*, 345 U.S. 83 at 93-94, 73 S.Ct. 534 at 540 (1953).

The *Shaw* decision conflicts with *Feres*, *Stencel* and *Shearer* in the following ways: (1) by inserting the judiciary into military decision-making concerning the equipping of the U.S. military; (2) by affecting military discipline through the establishment of a procedure for second-guessing military decisions concerning the appropriate types and uses of weapons systems; (3) by withdrawing the incentive for military suppliers to work closely with and consult military authorities in the development and testing of military equipment, since *Shaw* imposes potential liability if contractors are at all involved in the design process; and (4) by frustrating the *Feres-Stencel* rule prohibiting the imposition of costs upon the government for contractor liability to military personnel.

Had the district court and the Eleventh Circuit in this case correctly applied the military contractor defense as defined by all other circuits which have addressed the issue, *see Shaw v. Grumman Aerospace Corp.*, 778 F.2d 736 at 744 and footnote 14, judgment would have been rendered in favor of Grumman. Grumman manufactured the weapons system under a contract with the Navy. R. 705, ¶ 20; T. 3-6, 2-153; Defendant's Exhibit 5. The Navy participated in and reviewed all aspects of the design,

R. 707-708, ¶¶ 34-36; T. 2-120, 2-158, 2-168, 3-6, 3-12, 3-67 to 68, and tested and approved the prototypes. R. 708, ¶ 38; T. 3-19, 2-120. The possible effects of the failure which the district court found led to this accident were discussed with the Navy during the design phase, Defendant's Exhibit 2; T. 2-120, 3-135, and alternative designs were discussed. T. 3-68. The Navy approved the design found deficient by the district court, found that it met all specifications, and accepted the weapons system. *Shaw, supra* at 747; T. 2-120.

Certiorari therefore should be granted and this Court should review the Eleventh Circuit's decision which is in conflict with the principles enunciated in *Shearer, Feres* and *Stencel.*

IV. Certiorari Should Be Granted To Review The Lack of Record Support For The Holdings of The Courts Below.

The civilian courts should be particularly careful that their decisions affecting sensitive military matters are supported by sufficient factual evidence. The record in this case fails to support the district and appellate court holdings in numerous critical instances, especially the findings concerning alternative designs which would meet the military mission of the aircraft. The findings of fact also lack several necessary elements, including the availability of alternative designs which would have met with Navy approval. *Certiorari* should be granted to review the adequacy of the factual record to support the sensitive military decisions made by the courts in this case.

V. Conclusion.

The Eleventh Circuit Court of Appeals in this case found that "although the Navy did formally approve Grumman's A-6 specifications and design changes, that approval did not constitute the sort of informed military decision to accept the risk of a dangerous product to which this Court

must defer under separation of powers doctrine." *Shaw v. Grumman Aerospace Corp., supra* at 747. *Certiorari* should be granted by this Court in order (1) to review the military second-guessing engaged in by the Eleventh Circuit Court of Appeals, (2) to resolve the conflict that opinion creates among the Circuits, and (3) to review the lack of record support for the decisions of the courts below.

RESPECTFULLY SUBMITTED,
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APPENDIX 1

APPENDIX 1

Edwin Lees SHAW, as personal representative of the Estate of Gary Scott Shaw, Deceased, Plaintiff-Appellee,

v.

GRUMMAN AEROSPACE CORPORATION, Defendant-Appellant.

No. 84-5803.

United States Court of Appeals, Eleventh Circuit.

Dec. 19, 1985.

James E. Tribble, Blackwell, Walker, Gray, Powers, Flick, & Hoehl, Stephen O'Day, Hurt, Richardson, Garner, Todd & Cadenhead, Paul M. Talmadge, Jr., A. Paul Cadenhead, Atlanta, Ga., Frank J. Chiarchiaro, Mendes & Mount, New York City, James M. FitzSimons, Mendes & Mount, Beverly Hills, Cal., for defendants-appellants.

Joel D. Eaton, Miami, Fla., for plaintiff-appellee.

Charles M. Shaffer, Jr., King & Spalding, Atlanta, Ga., Jane E. Jordan, L. Joseph Loveland, Jr., Gary J. Toman, for amicus.

Appeal from the United States District Court for the Southern District of Florida.

Before FAY and JOHNSON, Circuit Judges, and HOFFMAN*, District Judge.

JOHNSON, Circuit Judge:

This case requires this circuit to decide for the first time whether the so-called "military contractor defense" is

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* Honorable Walter E. Hoffman, U.S. District Judge for the Eastern District of Virginia, sitting by designation.

available to shield a private defense contractor from liability to a serviceman killed as a result of an alleged design defect in the contractor's product. We hold that this Circuit will recognize such a defense, but we frame that defense and the rationales behind it somewhat differently from other circuits that have considered this question. Our analysis of the instant case under the terms of this defense leads us to AFFIRM the decision of the court below.

Facts And Proceedings Below

On December 12, 1979, at about 4 a.m., Navy Lt. J.G. Gary S. Shaw was killed when the plane he piloted, a Grumman A-6 (in its "tanker" version, the KA-6D), crashed into the ocean 100 miles off the coast of San Diego just two or three seconds after it was launched from the aircraft carrier Constellation. Although they recovered neither the body nor the wreckage, Navy investigators concluded that the most likely cause of the crash was the loss or failure of a bolt in the "stabilizer actuation system" or "longitudinal flight control system" [1] of the aircraft, which instantly sent the plane out of control on launch. The A-6 carries no device to warn of such a failure and no back-up system to take over if this sort of breakdown occurs. Investigators ruled out pilot error as a cause of the accident.

The A-6 is the mainstay of the carrier-based Naval air attack fleet. Since Grumman Aerospace began to manufacture this plane for the Navy in the 1960's, six other accidents involving longitudinal flight control failures have occurred. Grumman advised the Navy to address this problem by installing so-called "self-retaining bolts"[2] in the stabilizer system. This the Navy did in 1978, after a delay

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1. This system hydraulically operates part of the aircraft's tail, allowing the pilot to steer the plane up or down.

2. These bolts lock into place by means of a castellated nut and ball bearings to prevent uncontrolled "migration" of the stabilizers.

of some years for "fiscal reasons." Lt. J.G. Shaw's plane apparently crashed with one of the new bolts in place.

Edwin Lees Shaw, father of Lt. J.G. Shaw and personal representative of his estate, filed this wrongful death action on October 16, 1981, under the Death on the High Seas Act, 46 U.S.C.A. § 761, *et seq.*, and federal admiralty law alleging strict liability, negligence and breach of warranty against Grumman Aerospace. Shaw claimed that Grumman's A-6 design was defective because it failed to include any warning or back-up systems in the foreseeable event of a stabilizer control failure. In answer, Grumman asserted, *inter alia*, its immunity from suit under the "government contractor defense."

After a non-jury trial, the United States District Court for the Southern District of Florida, Aronovitz, J., entered judgment for plaintiff Shaw and awarded damages of $840,556.75 against Grumman, 593 F. Supp. 1066 (1984). In reaching its decision, the lower court, recognized the form of the government contractor defense set out by the Ninth Circuit in *McKay v. Rockwell International Corp.* 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043, 104 S.Ct. 711, 79 L.Ed.2d 175 (1984), but found that Grumman did not prove the elements of that defense.

The Military Contractor Defense

The Supreme Court has not addressed the issue of immunity from liability for military contractors who design products for government use. Four circuits have recognized varying forms of a military contractor defense.[3] *See Bynum v. FMC Corp.*, 770 F.2d 556, 561-62 (5th Cir.1985); *Tillett v. J.I. Case Co.*, 756 F.2d 591, 596-598 (7th Cir.1985); *Koutsoubos v. Boeing Vertol*, 755 F.2d

3. We adopt the term "military contractor defense," rather than the more common "government contractor defense." The former term is more descriptive and more precise.

352, 354-355 (3d Cir.1985); *McKay*, 704 F.2d at 448-451. Two other related defenses, which we refer to here as the "contract specifications defense" and the "government agency defense," have appeared from time to time in this Circuit. Discussion of these theories and the relationship among them has been frequent in recent years, but not invariably helpful. *See generally, Bynum; Johnston v. United States*, 568 F.Supp. 351 (D.Kan.1983).

Traditional Defenses

The three defenses above are based on different theories of liability and require different elements of proof.

[1] The "contract specifications defense" is in fact not, as the *Bynum* court points out, strictly speaking a defense at all. *Bynum*, at 560. When a contractor manufactures products to the order of another party, be that party the government or a private entity, he or she is simply not held to the same standard of care as an actual designer. Thus, the contractor will not be liable for damages caused by the product's design unless the specifications provided on order were so clearly defective and dangerous that a reasonably prudent contractor "would realize that there was a grave chance that his product would be dangerously unsafe." Restatement (Second) of Torts § 404 comment a. (1965). *See also Bynum*, at 560; *Johnston*, 568 F.Supp. at 354. This higher threshold of fault for a contractor is obviously available only where fault is at issue—that is, in a suit brought under negligence theory. Accordingly, the former Fifth Circuit rejected such a claim in a strict liability action. *Challoner v. Day & Zimmermann, Inc.*, 512 F.2d 77 (5th Cir.1975), *vacated on other grounds*, 423 U.S. 3, 96 S.Ct. 167, 46 L.Ed.2d 3 (1975), *remanded*, 546 F.2d 26 (5th Cir.1977).[4]

4. Appellee Shaw argues vigorously that *Challoner* forecloses recognition of a military contractor defense in this Circuit. *See Johnston*, 568 F.Supp. at 356 ("A few courts have flatly rejected

The contract specifications "defense" is not asserted in this case, so we do not consider its application. In suits involving military suppliers who participate in—and thus have knowledge of—product design, as in this action, it is in any event unlikely to be available.

A second and analytically distinct defense is the "government agency defense." It grows out of the Supreme Court's decision in *Yearsley v. W.A. Ross Construction Co.*, 309 U.S. 18, 60 S.Ct. 413, 84 L.Ed. 554 (1940), in which the Court absolved from liability a contractor who, at the request of the government, built dikes in the Missouri River and accidentally washed away part of petitioners' land. The *Yearsley* court apparently regarded this contractor as "an agent or officer of the government," acting on the government's behalf. *Id.* at 21, 60 S.Ct. at 414. Since "[t]he action of the agent is 'the act of the government,' " *id.* at 22, 60 S.Ct. at 415, the contractor could be deemed to share in federal sovereign immunity. Although such immunity has been waived in many cases, where injuries to military personnel incident to service result from defective product design, the government may not be sued for damages under the *Feres* doctrine. *See Feres v. United States*, 340 U.S. 135, 71 S.Ct. 153, 95 L.Ed. 152 (1950);

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the [government contractor defense], *see Challoner, supra. . . .*"). Although *Challoner* did involve a military contractor that produced a prematurely exploding howitzer, that contractor asserted only the "contract specifications defense," based on common law tort principles. It did not raise the military contractor defense, which is instead grounded in separation of powers theory (see discussion below)—and which, indeed, was not to our knowledge recognized by any court at the time of that suit.

Appellee is correct, however, in asserting that *Challoner* covers design defects, not just manufacturing errors. It is commonly so read. *See Challoner, supra* at 82.

Stencel Aero Engineering Corp. v. United States, 431 U.S. 666, 97 S.Ct. 2054, 52 L.Ed.2d 665 (1977).[5]

This defense is rarely invoked, and its elements are nowhere clearly stated. To evaluate a *Yearsley* claim in the military contractor context, a court would appear to be obliged to take three steps. First, it would apply the *Feres* doctrine to determine whether the government itself could be sued in that situation. If not, the court would then invoke a second body of doctrine, the law of principal and agent, to inquire whether the contractor actually acted as an agent of the government. Precedent in this Court makes it clear that, at least in manufacturing defect cases arising in a military setting, a firm must be more than simply an independent contractor to be regarded as the government's agent. In *Whitaker v. Harvell-Kilgore Corp.*, 418 F.2d 1010, 1013-1015 (5th Cir.1969), the former Fifth Circuit rejected the sovereign immunity claim of such a contractor that manufactured a defective grenade. Finally, if the contractor proved agency status, the court would inquire whether the agent acted within the course and scope of its duties.

We decline appellant's invitation to consider its defense under *Yearsley*, though we note that the *Whitaker* reasoning would in any case logically control in design as well as manufacturing defect cases. The agency/sovereign immunity theory was neither presented fully to nor ruled on by the court below.

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5. Under sovereign immunity/agency theory, this is again not strictly speaking a defense. The *Feres* doctrine declares that under certain circumstances the government is immune from suit and the court simply has no jurisdiction to hear the action. Thus, the term, government agency "defense," would be more apt if sovereign immunity were not imputed to the contractor, but liability were instead imputed to the government (which could not be sued) under a more traditional vicarious liability theory.

The Military Contractor Defense

We now consider the "military contractor defense" asserted in this case. As that defense is recognized in this Circuit, it is neither the same as, nor does it grow out of, either of the other two theories—contrary to the conviction of many. *See Bynum*, at 561 (the government contractor defense "is essentially an amalgamation of the two traditional defenses [contract specifications and *Yearsley*]"); *McKay*, 704 F.2d at 448 ("[t]his rule was first articulated by the Supreme Court in *Yearsley* . . . ."). The military contractor defense is available in certain situations not because a contractor is appropriately held to a reduced standard of care, nor because it is cloaked with sovereign immunity, but because traditional separation of powers doctrine compels the defense. Judge Pratt put this point succinctly in *In re "Agent Orange" Product Liability Litigation*, 534 F.Supp. 1046, 1054 n. 1 (E.D.N.Y.1982):

> The purpose of a government contract defense . . . is to permit the government to wage war in whatever manner the government deems advisable, and to do so with the support of suppliers of military weapons. Considerations of cost, time of production, risks to participants, risks to third parties, and any other factors that might weigh on the decisions of whether, when, and how to use a particular weapon, are uniquely questions for the military and are exempt from review by civilian courts.

We add that the purpose of such a defense is not only to permit the government actually to "wage war," but also to prepare for war—that is, this country need not be in combat for the defense to obtain. In making this determination, we do not implicitly sanction any and every military

judgment involving weapons or weapons systems[6] potentially dangerous to servicemen. We simply acknowledge that in our constitutional system, when a knowing and purposeful decision to employ such products is made by the military, the judiciary may not question it.[7] The public, of course, retains its right to dispute or to endorse those decisions—from the use of "Agent Orange" to the military's choice of aircraft—in the court of public opinion or at the polls.

In acknowledging our obligations under separation of powers doctrine, we are also mindful of the longstanding commitment of our judicial system—developed in the common law of torts, and more recently in interpretation of strict product liability statutes—to the fair compensation of the individual victim of defectively designed products.[8] Thus, in recognizing a defense to liability for military contractors, we carefully frame a *narrow* exception to the

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6. At present, we need not reach the question of whether the military contractor defense potentially applies to *any* product—a belt buckle or a can of Spam—supplied to the military. The Grumman A-6 at issue here was clearly part of a "weapons system." *But see Tillett*, 756 F.2d at 598 (military contractor defense applies to all "military equipment" including pizza machines, jeeps, tractors and front-end loaders).

7. *See Chappell v. Wallace*, 462 U.S. 296, 302, 103 S.Ct. 2362, 2366, 76 L.Ed.2d 586 (1983) (quoting *Gilligan v. Morgan*, 413 U.S. 1, 10, 93 S.Ct. 2440, 2445, 37 L.Ed.2d 407 [1973]): "The complex, subtle and professional decisions as to the composition, training, equipping and control of a military force are essentially military judgments, subject always to civilian control of the Legislative and Executive branches. The ultimate responsibility for these decisions is appropriately vested in branches of the government which are periodically subject to electoral accountability."

8. We note that injured servicemen are in many cases at least partly compensated under the Veteran's Benefit Act. *See Feres*, 340 U.S. at 145, 71 S.Ct. at 158.

product liability law that governs all other product designers. In so doing, we are compelled to examine rigorously, and at some points to reject, the rationales behind the defense and the elements necessary to establish it as prescribed by other circuits.

Rationales For The Defense

The leading version of the military contractor defense was set out by the Ninth Circuit in *McKay*, 704 F.2d at 448-451.[9] The *McKay* court declared that "[t]he reasons for applying the government contractor defense to suppliers of military equipment with design defects approved by the government parallel those supporting the *Feres-Stencel* doctrine." *Id.* at 449. Although in our view the military contract defense may be applied quite apart from *Feres*—that is to say, its separation of powers rationale is independently coherent—we accept the parallel. However, since the *Feres* doctrine has undergone a certain amount of reworking since its inception and, indeed, even since *McKay*, it is necessary to reframe the *McKay* rationales somewhat.

The *McKay* court articulated four such policy rationales to support the military contractor defense based on *Feres*. First, it claimed that holding a military supplier liable in these cases would "subvert the *Feres-Stencel* rule," because those contractors would pass on the cost of accidents to the government in their contract prices. *Id.* at 449. Second, the *McKay* court reasoned that to hold military suppliers liable for defective designs where the government set or approved the design specifications would improperly "thrust the judiciary into the making of military decisions." *Id.* Third, the court concluded that imposing liability on the contractor would undermine the

9. *Koutsoubos, Tillett* and *Bynum, supra*, adopt the *McKay* rationales. These have been criticized on several grounds. *See, e.g.*, Judge Alarcon's *McKay* dissent, 704 F.2d at 456.

nation's "ability to push technology to its limits and thereby to incur risks beyond those that would be acceptable for ordinary consumer goods." *Id.* at 450. Finally, the court suggested that the defense encourages suppliers to work closely with military authorities in the development and testing of equipment, so that responsibility for product design is more easily fixed. *Id.*

We regard the first *McKay* rationale as a weak support for the government contractor defense for several reasons. First, we are not convinced that the cost pass-through rationale is economically sound. To the extent that any competition obtains in the market for defense products, for example, contractors with defective designs may be deterred from passing through the cost of liability[10] for defective design[11] by competition from contractors with better safety records. *See McKay,* 704 F.2d at 457 (Alarcon, J., dissenting). And even if there is some transfer of costs, the net price to the government of contractor liability in these cases might be less *without* a tort law exception—that is, if legal incentives promote better-designed planes and fewer costly accidents. (The loss from the crash of a single A-6 is in the millions of dollars—not to mention the cost in human terms.)

Second, economically sound or not, the cost pass-through rationale is based on a strained reading of *Stencel* and an outdated interpretation of *Feres.* What the Court refused to let in the "back door" in *Stencel,* 431 U.S. at 673, 97 S.Ct. at 2058, in which the Court barred a cross-claim against the government by a military contractor sued

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10. This is actually likelier to be the cost of liability insurance premiums.

11. The *McKay* court's reluctance to allow such a pass-through in these cases is inconsistent with the general tolerance of the same practice in manufacturing defect cases. *See Johnston,* 568 F.Supp. at 357.

for product liability, was full and compulsory indemnification for the serviceman's claim. More adventitious pass-through of some portion of the cost of product liability insurance by a contractor presents a considerably attenuated problem. *Stencel* itself at least arguably sanctioned some cost pass-through by contractors. *See id.* at 674 n. 8, 97 S.Ct. at 2059 n. 8 (the contractor "no doubt had sufficient notice so as to take this risk into account in negotiating its contract for the emergency eject system at issue here"). *See also McKay,* 704 F.2d at 457 (Alarcon, J., dissenting).

But in any case, the limitation of government liability rationale behind the *Feres-Stencel* doctrine appears, since a recent Supreme Court decision, to be "no longer controlling." *United States v. Shearer,* —U.S.—, 105 S.Ct. 3039, 3043 n. 4, 87 L.Ed.2d 38 (1985). Thus, this Circuit will not recognize a military contractor defense simply to shield such contractors—and (only arguably) the government—from the cost of liability for defectively designed products.

As we noted above, there are better reasons for the defense. The factors controlling in *Feres* inquiries that do survive *Shearer* are (1) "whether the suit requires the court to second-guess military decisions," and (2) "whether the suit might impair essential military discipline." *Id.* 105 S.Ct. at 3043. These concerns are often conflated into a single "military discipline rationale" for the *Feres* doctrine. But the two strands of analysis are distinct. The former is the classic separation of powers theory described above. Applied to the military supplier context, it means simply that the military must be free to decide that the risk of accident or injury to servicemen from a design defect in the equipment it orders is a risk that it is willing to take—without judicial interference. This is the basis for the military contractor defense in this Circuit.

The latter "military discipline" strand was most clearly set out in *United States v. Brown,* 348 U.S. 110, 112, 75 S.Ct. 141, 143, 99 L.Ed. 139 (1954), in which the Court said that "[t]he peculiar relationship of the soldier to his superiors, the effects of the maintenance of such suits on discipline, and the extreme results that might obtain if suits under the Tort Claims Act were allowed for negligent orders given or negligent acts committed in the course of military duty" underlies *Feres'* grant of immunity. Two concerns are actually involved here: (1) the notion that a soldier might use the civilian courts to challenge the act or order of a superior officer; and (2) the idea that in a civilian suit of any sort involving a serviceman, members of the military might be compelled to testify against one another, to the detriment of discipline. The former quite simply would not justify a military contractor defense since the challenge in these cases is to an independent contractor, not a military officer.[12] (Insofar as a military "order" is implicated—that is, the original decision to buy and use the product at issue—it is covered under the military decision strand, above.)

The latter concern is also not present in military contractor suits in quite the same way as it is under *Feres.* The *Feres* exception to the FTCA renders the United States government immune from suit, so that potentially disruptive testimony by fellow servicemen is for the most part simply precluded. The military contractor defense is, in

12. Appellant argues that military discipline will be disrupted in the instant suit because "a final determination by a court that the A-6 is unreasonably dangerous may lead Navy pilots to question orders to fly A-6's." Reply Brief of Appellant at 7. And *amici* claim that such a finding would not only "disrupt the confidence of military personnel in their equipment and defenses" but also "create doubts among our allies and 'delight our enemies.' " Brief of *Amici Curiae* at 25. But if anything persuades pilots to tremble and the enemy to rejoice, it will be the A-6's accident record itself—not this court's recognition of it.

contrast, an affirmative defense that must be pled and proved by defendant in the course of suit. In other words, whether the defense is asserted or not, the plaintiff will in any event put on his or her case. Indeed, it may be the raising of the defense, rather than the maintenance of the action itself, that makes potentially conflicting military testimony necessary—a point which, of course, argues in favor of liability for contractors, and against the availability of the military contractor defense. However, since we think the likelihood of any profound disruption of discipline is negligible from testimony in suits against military contractors, we decline to rest either recognition or rejection of the defense on this frail support. Thus, we find, as this Court did in *Cole v. United States,* 755 F.2d 873, 879 (11th Cir.1985) (need to protect military discipline does not extend to suits involving veterans), that the danger of interfering with discipline in military contractor cases "is too remote to be accorded significant weight when the decision only indirectly involves military orders or practices concerning active duty soldiers."

We turn finally to the last two rationales used by the *McKay* court to justify the military contractor defense. That court's concern that the imposition of liability on contractors would chill risk-taking in the development of new technology is, in our view, no more than a restatement of the military decision rationale outlined above. Under separation of powers theory, military risk-taking—where it involves products supplied by contractors—is shielded from judicial scrutiny by the military contractor defense, provided only that it is knowing and purposeful. To adopt the new technology argument as an independent rationale for the defense is not only to be redundant, but also to invite unproductive quibbling over whether or not a particular product is actually on the cutting edge.

We find the last *McKay* rationale—the notion that the military contractor defense encourages the military and its

suppliers to work closely together, thereby making it easier to discover who is responsible for product design—somewhat inscrutable. Indeed, on the contrary, our experience is that the more closely the contractor and the military work together, the more difficult it is to determine exactly who made design decisions. In any case, as it is now limited by *Shearer*, *Feres* provides little support for this rationale.

[2] In sum, we recognize a military contractor defense in this Circuit based exclusively on the theory that the constitutional separation of powers compels the judiciary to defer to a military decision to use a weapon or weapons system (or a part thereof) designed by an independent contractor, despite its risks to servicemen.[13] The court's task is to inquire whether such a decision has been made and, if not, to apply the standard principles of product liability law.

Elements of the Defense

Courts have adopted two basic forms of the government contractor defense; and one hybrid version. The leading standard, again, was set out by the *McKay* court. *McKay*, 704 F.2d at 451. That rule is as follows:

> [A] supplier of military equipment is not subject to section 402A [strict] liability for a design defect where: (1) the United States is immune from liability under Feres and Stencel, (2) the supplier proves that the United States established, or approved, reasonably

13. The decision to which, under this holding, the judiciary properly defers is a "military decision" not only in the sense that it is one made *by* the military, but also in the sense that it involves an assessment of the risks of the product *to servicemen* in activities, as *Feres* puts it, "incident to service." Under the facts of this case, we do not reach the very different problem of civilian plaintiffs injured as a result of a military decision to use potentially dangerous products.

precise specifications for the allegedly defective military equipment, (3) the equipment conformed to those specifications, and (4) the supplier warned the United States about patent errors in the government's specifications or about the dangers involved in the use of the equipment that were known to the supplier but not to the United States.

In *Tillett* and *Bynum,* the Seventh and Fifth Circuits adopted the *McKay* test without modification. This is the test appellant advocates and the one, in fact, that the court below applied (although perhaps incorrectly).[14]

The other major version of the standard was announced in *In Re "Agent Orange" Product Liability Litigation,* 534 F.Supp. at 1055 (manufacturers of chemical defoliant not liable to American servicemen for effects of exposure). The three elements of that defense are: (1) proof that the government established contract specifications for the product; (2) proof that the contractor complied in all material respects with the specifications; and (3) proof that the government's knowledge of the hazards of the finished product was at least equal to that of the contractor. *Id.* As part of the third element, the court imposed a duty on the

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14. Despite the emphasis on "approval" of specifications in part two of the *McKay* test, the trial judge's memorandum of law in this case notes that "mere Navy approval of the detailed design specifications and drawings developed by Grumman does not make the government contractor defense available to it." Record at 716, ¶ 93. The court relied on *Schoenborn v. Boeing Co.,* 586 F.Supp. 711 (E.D.Pa. 1984), as support for this proposition. However, *Schoenborn* has since been reversed by the Third Circuit, which held that at least as regards Pennsylvania law, "the government contractor defense is available despite the contractor's participation in the development of the design, so long as the government has approved the design after substantial review of the specifications." *Cited sub nom. In Re: Air Crash Disaster at Mannheim Germany,* 769 F.2d 115, 122-23 (3d Cir.1985).

manufacturer to warn of the product's dangers. *Id.* at 1058.

The critical difference between the *McKay* and the *Agent Orange* tests is the degree to which the government may be involved in setting the product specifications. *McKay* seems to acknowledge that there is some *de minimis* level of government involvement below which the supplier should be held responsible for design defects. *McKay,* 704 F.2d at 450 ("[w]hen only minimal or very general requirements are set for the contractor by the United States the rule is inapplicable"). However, under the *McKay* test mere government approval of a contractor's design will shield the supplier from liability. No such provision obtains in the original *Agent Orange* test.

In *Koutsoubos* the Third Circuit introduced a kind of hybrid standard. It formally adopted the *Agent Orange* test, above, 755 F.2d at 355, but later read into its first part the *McKay* "approval" reasoning—that is, as the court said, "government approval of specifications developed through a continuous series of negotiations between the contractor and the military [would] satisf[y] the first prong of the *Agent Orange* defense, even though the majority of specifications originated with the contractor," *In Re: Air Crash Disaster,* 769 F.2d at 122. Thus, this test is virtually the same as the *McKay* defense.

We are not satisfied with either of these two standards. Our central concern is whether or not the military actually made a decision to use a product that it knew to be dangerous to servicemen. As the Third Circuit admitted in *In Re: Air Crash Disaster, id.* at 121, "no separation of powers concern arises unless the design in question represents a judgment by the military." Since the military and its representatives are not before us in these suits against contractors, we may not ask them for proof that such a decision was actually made. We may only require from the

contractor proof of the negative proposition—that the design in question does not merely represent a judgment by the supplier.

In fashioning a standard by which courts may measure responsibility for design judgments, we consciously avoid too sanguine a view of the usefulness of product "specifications." Specifications may be minimal or detailed, quantitative or qualitative, general or specific; they may range from meticulous descriptions of each bearing and bushing required, to vague hopes for "simple" or "failsafe" products. At times, several sets of specifications, sometimes conflicting, may govern a product's design all at once: e.g., one "spec" requiring back-up or redundancy systems in all products, another urging ease of maintenance, a third mandating combat effectiveness, a fourth seeking cost containment, and a fifth prescribing the dimensions of a washer. Worse still, these specifications may be promulgated by several different sources, military or civilian, at different times over the life of a product.

[3] Although we are conscious of some overlap, for purposes of our analysis we divide specifications into two types: (1) detailed, precise and typically quantitative[15] specifications for manufacture of a particular military product—that is to say, the design or blueprint for production; and (2) more general and more qualitative specifications, such as performance or mission criteria—that is to say, all other specs besides type one. If the type one design is generated exclusively by the military, then the product supplier is in the position of a manufacturer rather than a designer and, thus, is liable only for manufacturing defects (that is, failure to meet these detailed specifications).

In every other instance in which a contractor participates in the creation of a military product, it must be, in some

15. This, of course, includes schematic and "detail" drawings and written directives as well as figures.

respect, itself a producer of the type one product design—that is, one responding to general, qualitative military specifications with more precise and quantitative design specifications. Where the resulting product "fails" (crashes, explodes, aborts or otherwise injures someone) the design *a priori* is unlikely to meet the military's general, qualitative specifications: that is, it has not in fact accomplished its mission, or performed properly, simply, or safely.[16] Thus, the central inquiry of the *McKay* and *Agent Orange* tests—does the design conform to reasonably precise military specifications?—is, depending on the sort of specification we mean, either a question that is simply irrelevant to a design defect case (since an affirmative answer makes the contractor no more than a manufacturer), or a question begged by the very occurrence of the accident itself.

[4] Thus, we fashion a test with a somewhat different focus. As a general rule, the military contractor will be liable, as is any other contractor, to servicemen injured by defects (i.e., unreasonable dangerousness) in the products, or portions or phases of products, that it designs—that is, for which it provides type one specifications. A contractor may escape liability only if it affirmatively proves: (1) that it did not participate, or participated only minimally, in the design of those products or parts of products shown to be defective; *or* (2) that it timely warned the military of the risks of the design and notified it of alternative designs reasonably known by the contractor, *and* that the military,

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16. Hence, the inevitable post-crash finding in this case by the lower court, that "[t]he flight control system of the A-6 does not meet the Detail Specification for the Model A-6A (A2F-1) Airplane . . . regarding those essential features of simplicity, reliability, ease of maintenance and compensating provisions for failure, nor does it meet MIL-F-18372 (AER) . . . requiring a flight control system to be as simple, direct and foolproof as possible with respect to design, operation, inspection and maintenance." Record at 711, ¶ 64.

although forewarned, clearly authorized the contractor to proceed with the dangerous design.

Element one of this test is fashioned to allow a military contractor to show, when it actually works jointly with military personnel in producing type one product specifications, that the part it played was so minimal as to excuse it from proving the second part of the test. This determination is appropriately made by the trial judge. To structure the test in this way is self-consciously to turn the assumption behind the *McKay* test on its head. Here, we do not ask the contractor to prove that the government prepared the specs and find that the contractor's participation in their development through "continuous back-and-forth" will not defeat the defense, *Koutsoubos*, 755 F.2d at 355. Rather, we require the contractor to show that it did not prepare the specs, and hold that the government's participation, if sufficiently great, may prove the defense.

If element one of this defense is not proved, as in any other affirmative defense, by a preponderance of the evidence, then element two first requires a demonstration that the contractor both warned the military of the risks of the product or product part that it designed and informed it of design alternatives "reasonably known" to the contractor. Reasonable knowledge is not synonymous with omniscience. A risk is reasonably known when it is either actually known, or reasonably ought to be known given good design practice in the industry.[17] Similarly, an alternative is reasonably known if it is either actually known, or reasonably ought to be known given good design practice in the industry. Whether the contractor's counsel on these matters is sufficiently specific and complete to permit an

17. "The industry" will typically be defined by the product made (that is, the aircraft design industry) rather than by the maker's status (that is, the civilian or military, Air Force or Navy design industry).

informed decision on the part of the military is a matter of fact for the trial judge to determine.[18] In making this assessment of sufficiency, the court may take into account evidence that goes to the military's own level of relevant knowledge and expertise.

Element two further requires a showing by the contractor "that the military, although forewarned, clearly authorized the contractor to proceed with the dangerous design." Authorization here must be knowing—that is, more than "rubber stamp" approval. It must also be clear—that is, obviously related and responsive to the relevant warning.

The over-riding objective of this test, again, is to determine whether or not a military judgment to go ahead with a dangerous design was actually made. If so, the contractor that created or helped create the design is absolved from judicially-imposed liability. If not, then the contractor is subject to the customary strictures of product liability law.

Application of the Test

[5] Two design defects are alleged in the case at hand: (1) Grumman's failure to provide a back-up or warning system in the event of a "disconnect" in the longitudinal

18. It is no use to derive from military approval of specifications, as appellant would do, the assumption that the government decided that its information was sufficient to make this judgment—i.e., that it required no warning. Where the expertise of the contractor is superior, the military may simply be working in the dark. The contractor may not circumvent this requirement by obtaining a waiver of warning or a blanket product approval from the government. For the defense to obtain, the contractor must actually inform the military of the consequences of the latter's decision.

flight control system,[19] and (2) Grumman's failure to correct the disconnect problem with its proposal for "self-retaining" bolts. Grumman does not prove the elements of the military contractor defense as to either defect.

Element one requires proof that Grumman did not participate, or participated only minimally, in the design (that is, the production of type one specifications) of the defective product or part. But the trial court found that Grumman exclusively designed and produced detailed specifications for this aircraft. Grumman also suggested, in engineering change proposals (ECP's), the use of self-retaining bolts. The trial court's finding that Grumman was responsible for the A-6's design and alteration is not clearly erroneous.

Element two provides that a military contractor may still defend itself against liability if it timely informed the military of the design risks and alternatives reasonably known to it, and if the military, so warned, clearly authorized the contractor to proceed. The trial court found that Grumman knew of the defect in the longitudinal control system of the aircraft. It found, further, that Grumman failed to warn the Navy sufficiently of the danger inherent in the non-redundant longitudinal control system. The lower court noted that Grumman was both actually aware and reasonably should have been aware, given good design practice, of the risk of non-redundancy. And it found that

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19. It is settled law in this Circuit that a product may be found to have an unreasonably dangerous design because of the absence of a safety device. *Foster v. Ford Motor Co.*, 616 F.2d 1304, 1310 (5th Cir.1980). We are unpersuaded by appellant's contention that appellee is compelled as a matter of law to prove that an alternative design is feasible and practical. We note that, as a matter of fact, the district court was satisfied that design alternatives had not been fully explored. We cannot conclude that this finding was clearly erroneous.

the Navy did not have sufficient expertise to render a warning of that risk unnecessary.

As to the self-retaining bolts, the trial court also found that the Navy relied on Grumman's advice that these would solve the problem. This may be read as a finding of a failure to warn that the bolts would not correct the underlying defect. None of these findings is clearly erroneous.

Thus, although the Navy did formally approve Grumman's A-6 specifications and design changes, that approval did not constitute the sort of informed military decision to accept the risk of a dangerous product to which this Court must defer under separation of powers doctrine.

Appellee therefore recovers, and the judgment of the lower court is AFFIRMED.

APPENDIX 2

APPENDIX 2

Edwin Lees SHAW, as Personal Representative of the Estate of Gary Scott Shaw, deceased, Plaintiff,

v.

GRUMMAN AEROSPACE CORPORATION, Defendant.

No. 81-2295—Civ.

United States District Court,
S.D. Florida.

Sept. 12, 1984.

Robert L. Parks, Podhurst, Orseck, Parks, Josefsberg, Eaton, Meadow & Olin, P.A., Miami, Fla., for plaintiff.

Francis A. Anania, Blackwell, Walker, Gray, Powers, Flick & Hoehl, Miami, Fla., for defendant.

MEMORANDUM OPINION CONTAINING FINDINGS OF FACT AND CONCLUSIONS OF LAW

ARONOVITZ, District Judge.

THIS CAUSE was tried to the Court non-jury. It is a case arising under the Death on the High Seas Act, 46 U.S.C. § 761 *et seq.* and Federal Admiralty Law, 28 U.S.C. § 1333. The Court has heard the testimony of the lay and expert witnesses, received numerous exhibits, examined the entire Court record, and has heard Oral Argument by respective counsel. Accordingly, there is herewith entered this Court's Findings of Fact and Conclusions of Law based upon the aforegoing.

Findings of Fact

1. On December 12, 1979 at about 4:00 o'clock A.M., Navy Lieutenant J.G. Gary S. Shaw was killed when the

Grumman A-6 aircraft he piloted, NG523, Bureau Number 151566 ("subject aircraft"), pitched violently and suddenly into the ocean about 100 miles off San Diego immediately after having been catapult-launched from the aircraft carrier Constellation. The crash occurred within two to three seconds after launch and within several hundred feet forward of the bow of the Constellation.

2. Neither the bodies of Lieutenant Shaw and his bombardier-navigator Lieutenant Bates nor the wreckage of NG523 were ever recovered.

3. Plaintiff Edwin Lees Shaw, the father of the decedent, is the Personal Representative of the Estate of Gary Scott Shaw, deceased, and the estate is being probated in Dade County, Florida.

4. Grumman Aerospace Corporation is a citizen of the State of New York with its principal place of business in the State of New York. It also is authorized to do business in the State of Florida.

5. At all times material, Gary Scott Shaw was a resident of Fort Lauderdale.

6. At all times material, the subject aircraft was being used in a reasonably foreseeable manner for its intended purpose and Gary Shaw was foreseeable user.

7. As a result of his death, Gary Shaw's widow suffered loss of his support and services; loss of inheritable estate he might have accumulated; and the expenses for his funeral. Their daughter, Kelly, lost the benefit of his support, services, nurture, guidance, and inheritable estate. The parties and their attorneys agreed and stipulated that these damages total $840,556.75, with the exception of certain possible deductions (VA benefits) and/or additions (pre-judgment interest).

8. An extensive Naval J.A.G. investigation into the accident was conducted by Lieutenant Commander John

Schork, who was the assistant maintenance officer on board the Constellation at the time of the accident and an eyewitness to the events.

9. The investigation included interviews with other eyewitnesses, ship's personnel and friends of Gary Shaw. It also included information gathered from the aircraft logbooks and records, the film of the fatal launch, and simulated tests of various possible breakdowns on the hydraulic flight systems trainer at Whidbey Island.

10. This Court admitted into evidence those portions of the Factual Findings made by Lieutenant Commander Schork in his authority as investigating officer. Although his opinions as contained in the Report (Plaintiff's exhibit 19) were not admitted verbatim as opinions expressed in the Official Report of Investigation, nevertheless he testified that if questioned on direct examination as to each opinion rendered therein, he would confirm and testify as stated. Rather than taking his exact testimony, plaintiff therefore adopted by reference his opinions while the witness was on the stand, questioned him further and then turned him over for cross-examination as to his testimony on the Factual Findings as well as his own opinions which coincided with the Report of Investigation. Lieutenant Commander Schork considered the following possible causes of the accident and rejected them as only remote possibilities: engine failure; catapult failure; problem with the flaps and/or slats; pilot incapacitated; runaway trim; suicide or disorientation.

11. Narrowing down the most logical reason for the crash to the uncontrolled leading edge of the horizontal stabilizer, Lieutenant Commander Schork considered the six most likely problem areas to be (1) loss of a locking bolt in longitudinal control system; (2) willfull tampering; (3) damages to the control system by a foreign object; (4) failure of a major structural member of the aircraft;

(5) failure of a component or attaching structure in the longitudinal control system; and (6) malfunction of the electro-mechanical Automatic Flight Control System (AFCS). Willfull tampering and failure of a major structural member were considered by Schork to be unlikely. He termed damage by a foreign object and malfunction of the AFCS remote.

12. Based on all of the information gathered in his investigation, it was Lieutenant Commander Schork's opinion that the subject crash was due to either a loss or failure of hardware in the stabilizer actuation system. This conclusion was supported by the violent nose down pitch of the aircraft and the coincidence of stabilizer travel time during the actual launch as filmed and those simulated on the A-6 trainer at Whidbey Island, when the bolt connecting the load release bungee to the walking beam was disconnected. Lieutenant Commander Schork then was not only an eyewitness, a participant in the flight exercises, an expert in his own right with regard to the subject matter of the crash, but he also prepared the Official Report of Investigation.

13. All of the evidence including the above investigation and the opinion of expert witnesses, support the conclusion that a disconnect in the longitudinal flight control system of NG523 caused failure of that system and, because there was no alternate means for the continuation of safe flight in the event of such failure, the aircraft became uncontrollable. The opinions rendered, each respectively by both of the Plaintiff's expert witnesses, Thomas Lombardo and Ira Rimson, are credible and seemingly well-founded. This Court accepts these opinions as relevant and pertinent toward establishing liability asserted by the Plaintiff herein.

14. Joseph Novak, the A-6 engineering manager, a Grumman employee, testified by deposition (Plaintiff's exhibit 13 at p. 107, line 3-14) as follows:

> "... Q. And your basic opinion concerning the disconnect which caused this crash, did that come about through your reading of the Navy JAG report?
>
> A. No, we had a fundamental opinion back right at the time of the accident. Had nothing to do with reading a JAG report.
>
> Q. And that was based on the flight characteristics coming over the cat?
>
> A. Our understanding of the report of the behavior of the airplane coming off the cat leads the opinion to be that there was a probable disconnect in the longitudinal control system..."

and again, Joseph Novak in Plaintiff's exhibit 13 at line 2:

> "...A. The opinion I have is that of a disconnect someplace in the flight control system..."

That was the opinion rendered by the A-6 engineering manager for Grumman. In live testimony, when called by the Defendant, this witness attempted to recede slightly from this opinion but essentially confirmed it.

15. Lieutenant Commander Daniel Jorvig was an eyewitness to the tragic incident and at the time, he was a catapult arresting gear officer launching aircraft aboard the Constellation. He testified that in his opinion as the Shaw aircraft pitched down, he observed the leading edge of the stabilizer in an *up* position. This is consistent with a leading edge stabilizer up resulting in a nose pitch down as occurred here. This, therefore, was consistent in affording corroboration that the cause of crash was in the longitudinal control system which failed suddenly.

16. While evidence indicates that the disconnect occurred aft of the feel bungee by the walking beam at

about Station 520, where it occurred is not relevant as the ultimate defect was lack of redundancy in the longitudinal flight control system.

17. The actual cause of the accident was the uncontrollable rotation of the longitudinal stabilizer to a leading edge-*up* position, which was the result of a design that did not incorporate any failsafe positions to preclude this uncontrollable travel by providing an alternate means of control in the foreseeable event of disruption of the non-redundant primary longitudinal control system, thereby creating a situation that was unreasonably dangerous.

18. The dangerous condition or defect in this system was the lack of control capacity on the part of the pilot in the event of a disconnect to prevent the migration of an essential part of his primary control system to a position which renders the aircraft completely uncontrollable and renders a crash certain to occur.

19. Grumman was and is engaged in the business of designing, manufacturing and selling aircraft such as the A-6.

20. In the course of its business, Grumman designed, manufactured and sold the aircraft KA-6D, NG523, Bureau No. 151566, to the Navy. It is a tanker version of the A-6; an attack aircraft.

21. The subject aircraft was expected to and did reach Gary Shaw without any substantial change in the condition in which it was sold, except such changes as were proposed by Grumman itself to cure the defective condition which is the subject of this litigation.

22. The subject aircraft was in a defective condition so as to be unreasonably dangerous to a user or consumer.

23. Grumman failed to use reasonable care in the design of the longitudinal flight control system of the A-6 aircraft.

24. Grumman knew or should have known that if the subject aircraft were not properly designed, manufactured and tested, there would be created an unreasonable risk to foreseeable users like Gary Shaw.

25. Grumman's lack of care resulted in an inherent design defect, *i.e.*, total lack of redundacy in the longitudinal flight control system so that in the case of a disconnect, the aircraft becomes uncontrollable; moreover, there is no warning device to alert the crew to the impending peril when such a disconnect does occur.

26. During the years since production of the A-6 had begun and prior to the Shaw accident, six other accidents or incidents had occurred.

27. Each of the previous six accidents involved a disruption of the longitudinal flight control system which occurred in such a way that the pilot was not able to maintain or retain control of the aircraft. In almost all of those cases the aircraft pitched in one dimension either uncontrollably up or down and two-thirds of them occurred during takeoff. These accident reports establish a history which would make Grumman aware of a defect in the longitudinal control system of the A-6.

28. Grumman chose to address the problem as a maintenance problem rather than as an inherent design defect. Grumman presented ECP's (Engineering Change Proposals) 731, 816 and 822 and their various amendments as solutions to the problem of catastrophic losses of aircraft and crew due to single point failure in the longitudinal system.

29. These ECP's proposed installation of self-retaining bolts at the many links points in the longitudinal flight control system. They were proposed by Grumman as its solution to the losses of crew and aircraft due to disconnects.

30. These ECP's were initially rejected by the Navy for fiscal reasons. ECP 822 was finally approved and Air Frame Change (AFC) 416 was issued by the Navy in February of 1978.

31. AFC 416 ordered retrofit of all A-6 series aircraft by installation of self-retaining bolts in their longitudinal flight control system. AFC 416 was divided into two parts (Part I and Part II) so as to permit early installation of the bolts at the points judged to be the most susceptible to failure, thus leaving the remaining bolts to be installed later.

32. Naval records and the aircraft logbook indicated that NG523 had undergone AFC 416 Part I in May of 1979, after which the aircraft logged 112.5—117.4 flight hours before the fatal crash. It would, therefore, appear that the failed bolt which caused the subject crash would have been of the new self-locking variety.

33. The Shaw accident demonstrates that the new bolts did not correct the defect in design.

34. The Navy provided generalized performance, mission and criteria specifications for the design and construction of the A-6.

35. As a result of competitive bidding in 1967, Grumman was awarded the contract to produce this aircraft and thereafter produced and submitted to the Navy its own detailed specifications represented by Grumman as fulfilling the criteria set by the Navy.

36. The Grumman specifications and drawings were routinely examined and approved by the Navy after which Grumman began production of the aircraft.

37. Pursuant to MIL-D-8706 (Defendant's Exhibit 1), paragraph 14.2.2.1, Grumman was aware that the Navy in accepting design data neither checks nor assumes responsibility for accuracy, completeness of detail or any deviation

from applicable specifications, unless specifically approved by BUAIR.

38. Both Grumman and the Navy tested and evaluated A-6 prototypes; however, the Navy's testing and evaluation was largely quantitative and concerned whether or not the aircraft met its mission and performance criteria.

39. Grumman had final control of the actual design of the aircraft including its longitudinal flight control system.

40. Grumman decided what type of system to use and what the elements of it should be.

41. The A-6 aircraft produced by Grumman, including the subject aircraft, were defective when they were delivered to the Navy.

42. Grumman impliedly warranted the A-6 aircraft to be airworthy, of merchantable quality, fit and safe for the purposes for which it was intended, and free from all defects.

43. Gary Shaw, as a Navy pilot assigned to the A-6, relied on these warranties.

44. Grumman breached these warranties by designing, manufacturing, assembling, and selling the subject aircraft in a defective and unreasonable condition.

45. The ultimate defect in the longitudinal control system was its total lack of redundancy or compensating provisions so that any single point failure could cause random migration of the stabilator inevitably resulting in catastrophe.

46. Should the disconnect occur in the A-6 aft of the feel bungee, a loss of control is impossible for a pilot to detect.

47. The A-6, as designed by Grumman, had no warning device to alert the crew that a disconnect had occurred. In a takeoff—low altitude situation like the subject accident,

this forestalls any opportunity on the part of the crew to attempt to eject.

48. Although aware of an inherent defect in the system, Grumman negligently proposed correction of the disconnect problem by the installation of the self-retaining bolts, leading the Navy to believe the defect in the design had been cured.

49. Good design requires consideration of possible failures and maintenance capabilities.

50. Grumman was aware of the lack of redundancy in the system and the lack of warning to the crew in case of loss of control due to a disconnect aft of the feel bungee in the longitudinal flight control system.

51. The design defect and Grumman's negligence with regard to it was a proximate cause of the subject accident and Gary Shaw's death.

52. Redundancy is a basic element of design. There is nothing unique, new or mysterious about designing a longitudinal flight control system so that loss of control of the horizontal stabilizer will not occur. In fact, redundancy in primary flight control systems has been customary in aviation for over 40 years. As a design requirement it is a must.

53. General aviation aircraft and commercial transport aircraft all have redundancy in longitudinal flight control systems.

54. The A-6 aircraft has other flight control systems with alternative control functions to provide redundancy. Examples of such redundancies are on the wing flap system which incorporates a symmetry sensor and in the speed breaks. Such redundancies are common in other aircraft.

55. Grumman viewed the problem as one caused by shoddy Navy maintenance instead of recognizing and

addressing the inherent defect in the design which, regardless of the cause of a disconnect, would likely result in catastrophe should a disconnect occur.

56. Grumman could have employed any of several alternative means to provide redundancy. Dual controls, while only one such available alternative measure, could have been put in this aircraft, albeit with a weight penalty and increased complexity.

57. Even though the inherent parts of the longitudinal flight control system are so strong that they in themselves provide a form of redundancy, this does not alleviate the need for redundancy in the case of disruption of the system.

58. The "detail specifications" which the Navy provided Grumman are actually quite broad, leaving to the manufacturer the actual design choices and particulars.

59. MIL-F-18372 (Plaintiff's exhibit 7) covers the general requirements for design, installation and test of flight control systems for all types of Navy aircraft and lists a number of different ways a contractor can design a flight control system.

60. The A-6 aircraft failed to meet the Navy's specifications in several respects.

61. Pursuant to military specifications, Grumman was required to perform a failure effects analysis of the longitudinal flight control system of the A-6.

62. Grumman's failure effects analysis of the A2F-1 (Report No. RC-F-128-1.0) recognized the lack of compensating provisions or redundancy and classified failure of any summing linkage component as a Class I failure, *i.e.*, "any single failure which is potentially fatal and would probably result in loss of the airplane or necessitate a forced landing".

63. Grumman performed no failure effects analysis on the A-6A at the time it modified the aircraft despite the

fact that Navy specifications require that one be done and despite the fact that the longitudinal flight control system was substantially altered from a stabilizer having a geared elevator to a single slab stabilator. Changes were also made to the bell cranks and push rods.

64. The flight control system of the A-6 does not meet the Detail Specification for the Model A-6A (A2F-1) Airplane (Plaintiff's exhibit 9A), paragraph 1.1.2a regarding those essential features of simplicity, reliability, ease of maintenance and compensating provisions for failure, nor does it meet MIL-F-18372 (AER), paragraph 3.1.-1.1, requiring a flight control system to be as simple, direct and foolproof as possible with respect to design, operation, inspection and maintenance.

65. The flight control system of the A-6 does not comply with MIL Spec. 18372, paragraph 3.1.1.24, which requires designing of certain devices so that their failure will not cause discontinuity of the system.

66. The flight control system of the A-6 did not meet the criterion as was revealed in its failure effects analysis.

67. Paragraph 3.2.15 of SD-24K (Plaintiff's exhibit 9-T), also mentions redundancy and failsafe requirements.

68. This failsafe revision of the Navy specifications called for and required a redundancy factor in the nature of a backup system. Grumman failed to design a redundant system.

69. It would have been possible to have designed a longitudinal flight control system for the A-6 which incorporated redundancy.

70. Installation of a locking device to prevent random migration of the stabilator is within the realm of feasibility. In fact, there are such locking devices on other control systems of the A-6.

71. The particular longitudinal flight control system employed by Grumman in the A-6 is neither uniquely military nor on the cutting edge of military design. This type of control system using bell cranks and push rods has been around general aviation a long time.

72. There was an imbalance of knowledge between Grumman and the Navy regarding the risks involved in Grumman's design of the longitudinal flight control system.

73. At all times material, Grumman was aware of the lack of redundancy in the longitudinal flight control system so that any single point failure would cause random migration of the stabilator inevitably resulting in catastrophe.

74. Grumman considered the random migration of the stabilator in the case of a disconnect, but gave no consideration to a safety mechanism to prevent it.

75. Grumman failed to discuss the ultimate defects in the longitudinal flight control system of the A-6 with the Navy and focused instead on the superficial problem of bolt failures.

76. Once aware of the defect due to the history of accidents with the aircraft, the Navy issued AFC 416 justifiably relying on Grumman's advice that the problem with the longitudinal flight control system would be solved by installation of the self-retaining bolts.

77. While the lack of redundancy may or should have been made apparent to the Navy, it had neither the design staff nor the expertise to comprehend the catastrophic potential and probability of the disconnect problem.

78. Grumman's knowledge, expertise in and awareness of design defects were superior to that of the Navy.

79. Grumman failed to warn the Navy about the ultimate and underlying defect in the longitudinal flight control system of the A-6.

80. The Navy was not aware of the defect in design at the time it approved the detailed specifications submitted by Grumman.

81. Grumman failed to adequately warn the Navy or ultimate users of the aircraft like Gary Shaw of the inherent danger in the longitudinal flight control system of the aircraft.

Any of the foregoing findings of fact which may constitute conclusions of law are hereby adopted as conclusions of law.

Conclusions of Law

[1] 82. This Court has jurisdiction pursuant to the provisions of the Death on the High Seas Act, 46 U.S.C. § 761 *et seq.* and Federal Admiralty Law, 28 U.S.C. § 1333. Venue is proper.

[2] 83. Given the Navy's determination as to the capabilities the A-6 should have, as embodied in the performance specifications it submitted to Grumman, the A-6 aircraft was not fit for its intended use.

84. It was Grumman who supplied the actual detailed designs and who had final control over the aircraft. *See Schoenborn v. Boeing Company,* 586 F.Supp. 711 (E.D. Pa.1984).

85. Given the Navy's specifications regarding the essential features of simplicity, reliability, ease of maintenance and compensating provisions for failure pursuant to Detail Specifications (Plaintiff's exhibit 9A), paragraph 1.1.2a, and those in MIL-F-18372 (AER), paragraph 3.1.1.1. requiring a flight control system to be as simple, direct and foolproof as possible with respect to design, operation, inspection and maintenance, the A-6A, as designed by Grumman, failed to meet the government's general specifications in all material respects. Furthermore, its own failure analysis revealed the defect to the Grumman.

[3] 86. Grumman was negligent in its design, manufacture, and testing of the A-6 aircraft and in particular its longitudinal flight control system.

[4] 87. Grumman's negligent design of the subject aircraft proximately caused the death of Gary Shaw, a foreseeable user to whom Grumman owed a duty of care.

[5] 88. Grumman's design of the subject aircraft constituted a breach of warranties of merchantability, fitness, and freedom from defects so as to proximately cause the death of Gary Shaw, one entitled to rely upon such warranties.

[6] 89. Grumman is strictly liable to the Plaintiff for damages for the death of Gary Shaw. *See Schoenborn v. Boeing Company, supra; see also, Jenkins v. Whittaker Corp.*, 551 F.Supp. 110 (D.Hawaii 1982).

[7] 90. Defendant asserts the *Feres—Stencel* government contractor defense. *See Feres v. United States,* 340 U.S. 135, 71 S.Ct. 153, 95 L.Ed. 152 (1950); *Stencel Aero Engineering Corp. v. United States,* 431 U.S. 666, 97 S.Ct. 2054, 52 L.Ed.2d 665 (1977). The burden of proof regarding the availability of the government contractor defense rests with Grumman. *See McKay v. Rockwell International Corp.*, 704 F.2d 444, 451 (9th Cir.), *cert. denied*, —— U.S. ——, 104 S.Ct. 711, 79 L.Ed.2d 175 (1984); *In Re Agent Orange Product Liability Litigation,* 534 F.Supp. 1046, 1055 (E.D.N.Y.1982); and *Hubbs v. United Technologies,* 574 F.Supp. 96, 98 (E.D.Pa.1983). It must be proved by a preponderance of the evidence. *McKay* at 453.

[8] 91. Grumman has failed to meet its burden of proof in regard to application of the government contractor defense. The evidence is insufficient to show that: 1) the Navy and not Grumman established the actual detail specifications and drawings of the longitudinal flight control system of the aircraft; 2) Grumman met the government

specifications in all material respects in design of the A-6 aircraft; 3) Grumman warned the Navy about patent errors in the specifications or about dangers involved in the use of the aircraft that were known to Grumman but not to the Navy. See *McKay v. Rockwell International Corp., supra; In Re Agent Orange Liability Litigation, supra; Koutsoubos v. Boeing Vertol, Division of Boeing Co.,* 553 F.Supp. 340 (E.D.Pa.1982); and *Hubbs v. United Technologies, supra.* Furthermore, there was an imbalance of knowledge about the defect between the supplier and the military at the time Grumman's detail specifications were approved. Once aware of the design defects, the Navy was lead by Grumman to believe that the installation of the self-retaining bolts would correct the problem. The Navy was justified in relying on Grumman's design expertise and experience when it represented that the new bolt would correct the problems caused by the defect.

[9] 92. Because the design decisions material to the defect alleged required no military expertise, there is no justification for insulating a contractor from liability where the government merely approves of the decision.

93. In any case, mere Navy approval of the detail design specification and drawings developed by Grumman does not make the government contractor defense available to it. "Where a contractor establishes a product's detailed specifications and the government merely approves them, the government contractor defense is not available to the contractor." *Schoenborn v. The Boeing Co., supra.*

94. The parties have stipulated that the total damages recoverable by the Plaintiff, in the event liability is found for Plaintiff, is the sum of $840,556.75, with the exception of certain deductions (VA benefits) and/or additions (pre-judgment interest). The parties have submitted memoranda of law, each respectively, covering both the VA benefits deductions issue and the pre-judgment interest

issue. Accordingly, having reviewed these memoranda of law and being otherwise fully advised in the premises, this Court concludes as to those two issues as follows:

[10, 11] A. The award of pre-judgment interest in death claims under DOHSA is discretionary with the trial Court. Pre-judgment interest may not be awarded in the case *sub judice* because: (1) Plaintiff waited almost two years after the death of Gary Scott Shaw before he instituted the instant suit; (2) there is a genuine dispute regarding liability in the case *sub judice* which was exacerbated by the fact that the wreckage of the aircraft has never been retrieved; and (3) this action involves complex factual and legal issues, including those pertaining to the applicability of the government contract defense. *Solomon v. Warren*, 540 F.2d 777 (5th Cir.1976); *First National Bank of Chicago v. Material Service Corporation*, 597 F.2d 1110 (7th Cir.1979); *Sinclair v. S.S. Green Island*, 426 F.2d 260 (5th Cir.1970).

[12] B. The parties agree that the widow and children of the deceased pilot have received and are receiving Veterans Benefits under the Veterans Benefits Act. Defendant argues that any damages awarded by the trial court should be reduced by the compensation received by Plaintiff under the Veterans Benefits laws. In support of this position, Defendant cites *Brooks v. United States*, 337 U.S. 49, 69 S.Ct. 918, 93 L.Ed. 1200 (1949); *Kubrick v. United States*, 581 F.2d 1092 (3d Cir.1978); *rev'd on other grounds*, 444 U.S. 111, 100 S.Ct. 352, 62 L.Ed.2d 259 (1979); *Pike v. United States*, 652 F.2d 31 (9th Cir.1981); *United States v. Brown*, 348 U.S. 110, 75 S.Ct. 141, 99 L.Ed. 139 (1954). These cases afford no comfort to Defendant because they simply hold that in an action against the United States under the Federal Tort Claims Act, such Veterans Benefits may be set-off as against a verdict adverse to the United States. Here the Defendant is not being asked to pay twice for the same injuries. Instead, the wrongdoing Defendant

is being assessed is for the wrong it afflicted on the Plaintiff and should not be reduced by reason of a third-party payment from the United States. *McKay v. Rockwell,* 704 F.2d 444 (9th Cir.1983), does not constitute authority to support Defendant's right to a set-off. The Ninth Circuit reversed the District Court's finding of liability and did not address the trial court's discussion of damages.

Plaintiff's position is bolstered by the fact that there is no duplicity of compensation because the payments come from different sources, *see United States v. Harue Hayashi* 282 F.2d 599, 604 (9th Cir.1960), and the "collateral source" rule, as applied under Florida law, prohibits any set-off. *See* 17 Fla.Jur.2d § 39, *Freeman v. Rubin,* 318 So.2d 540, 544 (Fla. 3d DCA 1975); *Felder v. United States,* 543 F.2d 657, 670 (9th Cir.1976); *Huddell v. Levin,* 395 F.Supp. 64, 88 (D.N.J.1975). This is not like the Federal Tort Claims Act cases where the wrongdoer is also the provider of the benefits. It is only fair that Grumman be made accountable for its transgressions.

95. Thereupon Final Judgment will be entered in favor of the Plaintiff and against the Defendant in the sum of $840,556.75, together with Plaintiff's costs to be taxed by the Clerk of this Court upon a Bill of Costs to be submitted by Plaintiff within THIRTY (30) DAYS herefrom.

CERTIFICATE OF SERVICE

I hereby certify that I am a member of the Bar of this Court, and that three (3) copies of the foregoing Petition for Writ of Certiorari were served on March 17, 1986, by United States Mail, first class, with proper postage prepaid and affixed, on all parties required to be served as follows:

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Dated this 17th day of March, 1986.

Stephen E. O'Day

STEPHEN E. O'DAY

Supreme Court, U.S.
FILED
MAY 5 1986
JOSEPH F. SPANIOL, JR
CLERK

(2)

Case No. 85-1529

In the Supreme Court of the United States

OCTOBER TERM, 1985

GRUMMAN AEROSPACE CORPORATION,
Petitioner,

vs.

EDWIN LEES SHAW, as Personal Representative of the Estate of Gary Scott Shaw, Deceased,
Respondent.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

RESPONDENT'S BRIEF IN OPPOSITION

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QUESTIONS PRESENTED FOR REVIEW

Because the Eleventh Circuit's opinion very carefully explains that the flight control system in issue here was designed exclusively by the defendant/petitioner and that no knowing and purposeful decision by the military was "second-guessed" by the trial court in finding the design defective and its designers negligent, we do not believe that the first two questions presented for review are implicated in this case. We also believe that the first two questions presented for review are highly argumentative. In our judgment, the remaining questions (as well as all subsidiary questions which might ultimately be relevant to a disposition of the case by this Court) can be fairly reduced to the following questions:

1. Does either the *"Feres-Stencel* doctrine" or the "separation of powers doctrine" provide a private independent contractor with an absolute defense to liability in a Congressionally authorized tort action for wrongful death caused by a defective product which the contractor has negligently designed and sold to the military?

2. If so, (a) what are the elements of the defense, and (b) did the defendant prove the elements of the defense as a matter of law below?

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Case No. 85-1529

In the Supreme Court of the United States

OCTOBER TERM, 1985

GRUMMAN AEROSPACE CORPORATION,
Petitioner,

vs.

EDWIN LEES SHAW, as Personal Representative of the Estate of Gary Scott Shaw, Deceased,
Respondent.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

RESPONDENT'S BRIEF IN OPPOSITION

The respondent, Edwin Lees Shaw, as personal representative of the Estate of Gary Scott Shaw, deceased, respectfully requests that this Court deny the petition for writ of certiorari seeking review of the Eleventh Circuit's opinion in this case.

STATEMENT OF THE CASE

The petitioner and its amici have largely ignored the factual findings made by the district court and approved by the Eleventh Circuit in this case. As a result, the

factual foundation upon which their arguments have been constructed is idealized and largely hypothetical. Although we recognize that the actual facts are more important to an ultimate disposition on the merits than to the threshold question of whether review should be granted, we would prefer that the Court make the latter determination on the facts which exist. We therefore refer the Court to the district court's findings of fact, which we will briefly highlight and embellish here.

Both Grumman and its amici would have it appear that the United States government is the real defendant here, and that the district court's judgment somehow questions the Navy's authority and invades the "separation of powers doctrine" as a result. The tactic is clever (perhaps even necessary to provoke a grant of review—since, without it, this would simply be an ordinary products liability case), but its deception should be transparent. Neither the United States nor the Navy are on trial in this case. The defendant is Grumman Aerospace Corporation, a private corporation in the business of designing, manufacturing, and selling civilian and military aircraft for profit (T. 2:134-35). Neither is there any basis for Grumman's insistence that anything short of absolute immunity from tort liability will require that the military be haled into court to account for its decisionmaking in the procurement process. No military personnel were called into court in this case; Grumman provided all the proof it thought necessary to sustain its so-called "military contractor defense" solely through the testimony of its own engineers.

Neither will the United States suffer any adverse financial impact from the judgment entered in this case. In fact, part of the contract price for the A-6 aircraft in issue here included the cost of liability insurance to cover

the accident in suit; indeed, the cost-plus-incentive-fee contract between the Government and Grumman *required* Grumman to purchase liability insurance coverage to cover the particular judgment in issue here (Defendant's Exhibit 5, Part 2, ¶16 of General Provisions (Cost-Reimbursement Type Research and Development Contracts), NavExos 3302(1-60)). In short, Grumman has already been paid by the Government to purchase liability insurance coverage for the benefit of the plaintiff in this suit. The record reflects that the required insurance coverage was purchased, and the only beneficiaries of a reversal in this case will therefore be windfall beneficiaries—insurers who have accepted substantial premiums to underwrite the very risk at issue here.

Next, in their pervasive effort to shade the facts to reinforce their arguments, Grumman and its amici have suggested (despite a finding of fact to the contrary, ¶39) that the design of the A-6's longitudinal flight control system was a joint effort by the Navy and Grumman. That is not what the record reflects. The record reflects that, after the Navy named Grumman as winner of a preliminary competition, Grumman proposed a "Detailed Specification" which was accepted by the Navy, and ultimately incorporated by reference into the contract finally entered into for production of the aircraft (T. 2:170; 3:4-7; Plaintiff's Exhibit 6). An examination of this "Detailed Specification" will reveal that its title is a misnomer—because it is very general in its terms, and it contains no detail whatsoever concerning the flight control systems yet to be designed pursuant to the specification and the contract (Plaintiff's Exhibit 6). The contract itself provides that responsibility for design rests with Grumman, not with the Navy (Defendant's Exhibit 5, Part 2, DD Form 351-1, Section F). Grumman's representatives also admitted

unanimously at trial that Grumman, not the Navy, designed the specifics of the longitudinal flight control system in issue here (T. 2:136, 158-68; 3:35-38, 93-95, 101-04).

To be sure, Grumman was required to submit its design data and drawings to the Navy for review and release (T. 2:167-68; 3:12-18), but the contract expressly provides (under a heading entitled "Design Responsibility") that "[i]n releasing design data or drawings to the Contractor, the Government accepts no responsibility for the successful operation of the equipment manufactured by the Contractor" (Defendant's Exhibit 5, Part 2, DD Form 351-1, Section S). The separate general military specification governing submission of design data and drawings during development of the A-6 also expressly provides that the Government does not assume responsibility for any deviation from applicable specifications, and that "[t]he responsibility for satisfactory construction and functioning of the aircraft or aircraft parts and for satisfactory stability and weight rests entirely with the contractor" (Defendant's Exhibit 1, p. 47, ¶¶4.2.2.1., 4.2.2.3.).

In short and in sum, the specifics of the A-6's longitudinal flight control system were designed solely by Grumman to meet only the most general of specifications, and the Navy's role was limited to checking the design data and drawings for completeness and compliance with the general specifications—but with a disclaimer of any responsibility for accuracy, completeness, compliance with specifications or proper functioning of the finished product. The obvious reason for this approach to the design of the aircraft was (as the trial court found in a finding of fact not challenged by Grumman below) that the Navy lacked the technical expertise to design the aircraft itself (which, as a matter of common sense, is why it contracted with

Grumman for the design of the aircraft in the first place). Clearly, although Grumman and the Navy collaborated upon the general specifications mislabeled "Detailed Specification", the actual design of the A-6's longitudinal flight control system was Grumman's design, not the Navy's. The Navy was simply one of Grumman's customers—a relatively sophisticated customer to be sure, but a customer nevertheless.

In another tortured effort to shade the facts to fit its argument, Grumman and its amici have laced their arguments with claims that the A-6 was "on the cutting edge of technology". We suppose that hyperbolic characterization might be valid with respect to some of the aircraft's electronics and weapons delivery systems, but it is a certainty that the flight control system in issue here was perfectly "conventional" in every sense of that term. The system consists simply of a connected series of pushrods and bellcranks (and assorted peripheral devices and hardware), held together by nuts and bolts, mechanically linking the cockpit's control stick to a dual hydraulic actuator and the stabilizer, located in the tail of the aircraft. Grumman's principal design engineer conceded at trial that this system had been in use for many years in both military and civil aircraft, and that it was perfectly "conventional" (T. 1:138, 152; 3:95-96). In fact, the system was touted in one of the documents placed in evidence by Grumman below not for any advance in the state of the art, but precisely because it was perfectly conventional—because it was essentially the same system successfully utilized previously in the S2F, F9F, and the F11F model airplanes (Defendant's Exhibit 2, p. 16 note (7)).

It is also untrue that, as Grumman claims, no other attack aircraft currently in use in the United States mil-

itary incorporates the type of redundant or fail-safe features which the district court found were negligently omitted from the A-6's longitudinal flight control system. In fact, all other primary and secondary flight control systems in the A-6 itself incorporated precisely the type of redundant or fail-safe features omitted from the critical control system in issue here (T. 1:167-69; 2:46-47, 99-100; 3:83-84). According to expert testimony presented below, redundancy in flight control systems has been a design "consent" in the industry ever since World War II (T. 2:23-24), and this "consent" was formalized by the military in 1973 by revising its general specifications to *require* exactly what was missing in the A-6's longitudinal flight control system (T. 2:24-27, 100-07). The head of Grumman's flight controls design group also conceded at trial that a redundant or fail-safe feature was feasible and could have been designed, and the only reasons he gave at trial for not including such features were that they were not "required", and that they were "unnecessary" because the longitudinal flight control system designed by Grumman was so reliable that "once it was put together properly, it would not fail" (T. 1:158, 165-66; 3:68-70, 123-24)—which brings us to our final point.

Grumman and its amici have applauded the general performance of the A-6 in various military theaters, and in the continuing defense of the nation. The self-congratulation is certainly deserved, and we have no quarrel with it—but the fact remains that the entire A-6 program is not on trial here. What is at issue here is the reasonableness of the design of the A-6's longitudinal flight control system—which is rendered absolutely useless by the loss of a single bolt or a single hardware failure anywhere in the lengthy mechanical system. Grumman clearly deserves no praise for that specific aspect of the A-6 pro-

gram, because the record reflects at least six instances of longitudinal flight control system disconnects or hardware failures, resulting in the total destruction of five A-6 aircraft, five fatalities, and one serious injury (four crewmembers successfully ejected) (T. 1:92-93; 2:53-63, 95; Plaintiff's Exhibits 9B, 9O-S).

All things considered, no matter how capable or reliable the A-6 may have been in other respects, its perfectly "conventional" longitudinal flight control system had a deplorable record by any standard—military, civil, lay, or otherwise. Grumman cannot properly dispute that contention, because even it recognized the seriousness of the problem by proposing a partial after-the-fact fix for it in the form of a retrofit of self-retaining bolts (T. 2:145-50). Unfortunately, the fix was insufficient to prevent the peacetime death of LTJG Gary Shaw and his bombardier/navigator, when the single series of mechanical linkages gave way in their A-6 on a night catapult shot, causing it to pitch instantly, uncontrollably and violently into the ocean.

REASONS WHY THE PETITION SHOULD BE DENIED

We cannot deny that there is an apparent disagreement among the Circuits concerning the precise nature of the elements of the so-called "military contractor defense". In our judgment, however, the conflict has been effectively resolved by this Court's recent decision in *United States v. Shearer*, 473 U.S. .. . 105 S. Ct. 3039, 87 L. Ed.2d 38 (1985), and there is therefore no need for the Court to resolve it again. At the very least, the issue deserves further exploration by the lower courts in light of *Shearer*, and there is therefore good reason for this Court to stay its hand at the present time.

The leading conflicting decision—*McKay v. Rockwell International Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984)—was decided more than two years before *Shearer*. In the two years which followed before *Shearer* was decided, *McKay* was uncritically followed by two other Circuits in *Tillett v. J. I. Case Co.*, 756 F.2d 591 (7th Cir. 1985); *Koutsoubos v. Boeing Vertol*, 755 F.2d 352 (3rd Cir.), *cert. denied*, ... U.S. ....., 106 S. Ct. 72, 88 L. Ed.2d 59 (1985); *Schoenborn v. The Boeing Co.*, 769 F.2d 115 (3rd Cir. 1985), *cert. denied*, ... U.S. ....., 106 S. Ct. 851, 88 L. Ed.2d 891 (1986).

All of these decisions rest primarily upon a perception that the "*Feres-Stencel* doctrine" is designed to prevent the Government from paying the cost of injuries sustained by its servicemen:

> The reasons for applying the government contractor defense to suppliers of military equipment with design defects approved by the government parallel those supporting the *Feres-Stencel* doctrine. First, the Supreme Court emphasized in *Stencel* that the United States cannot be directly or indirectly liable to servicemen injured by defective military products. But holding the supplier liable in government contractor cases without regard to the extent of government involvement in fixing the product's design and specifications would subvert the *Feres-Stencel* rule since military suppliers, despite the government's immunity, would pass the cost of accidents off to the United States through cost overrun provisions and equipment contracts, through reflecting the price of liability insurance in the contracts, or through higher prices in later equipment sales. . . .

McKay, supra, 704 F.2d at 449.

While we question whether this Court has ever advanced that rationale for the "*Feres-Stencel* doctrine", we need not debate that point here. We need not debate it because *Shearer* finally makes it clear that the only relevant considerations in determining whether the "*Feres-Stencel* doctrine" or the "separation of powers doctrine" is implicated are "whether the suit requires the civilian court to second-guess military decisions . . . and whether the suit might impair essential military discipline"—and that the other rationales for the doctrine which have appeared from time to time in the decisional law are "no longer controlling".[1] *Shearer, supra,* 87 L. Ed.2d at 44, 44 n.4. In short, *Shearer* rejects the primary underpinning of *McKay* and its uncritical pre-*Shearer* progeny.[2]

The instant case was decided after *Shearer* and its result is clearly influenced by the strong signal which this Court transmitted in *Shearer:*

> . . . The *McKay* court declared that "[t]he reasons for applying the government contractor defense to

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1. This announcement was an obvious response to a recent series of lower court decisions expressing puzzlement over the continued viability of all but the core rationale of *Feres,* and concluding that only the "military discipline rationale" made any sense. This development is discussed and analyzed (and the decisions collected) in *Johnson v. United States,* 749 F.2d 1530 (11th Cir. 1985), *approved on en banc reh'g,* 779 F.2d 1492 (11th Cir. 1986). It is noteworthy, we think, that *Shearer* completely vindicated the *Johnson* panel's pre-*Shearer* conclusion that only the "military discipline rationale" of *Feres* had survived the scrutiny of time, and that the en banc Court rested its approval of the panel's conclusion squarely upon this Court's intervening decision in *Shearer.*

2. It is also worth noting that even if *McKay's* misreading of *Feres* had survived *Shearer,* the "cost pass-through" rationale of *McKay* would provide no reason for a "military contractor defense" in the instant case, because the Government insisted in its contract that Grumman purchase liability insurance for the benefit of the plaintiff in this case and voluntarily paid the cost of that insurance.

suppliers of military equipment with design defects approved by the government parallel those supporting the *Feres-Stencel* doctrine," . . . Although in our view the military contract defense may be applied quite apart from *Feres*—that is to say, its separation of powers rationale is independently coherent—we accept the parallel. However, since the *Feres* doctrine has undergone a certain amount of reworking since its inception and, indeed, even since *McKay*, it is necessary to reframe the *McKay* rationales somewhat.

. . . .

. . . [E]conomically sound or not, the cost pass-through rationale is based on a strained reading of *Stencel* and an outdated interpretation of *Feres*. . . .

But in any case, the limitation of government liability rationale behind the *Feres-Stencel* doctrine appears, since a recent Supreme Court decision, to be "no longer controlling." *United States v. Shearer*, ... U.S. ....., 105 S. Ct. 3039, 3043 n.4, 87 L. Ed.2d 38 (1985). Thus, this Circuit will not recognize a military contractor defense simply to shield such contractors —and (only arguably) the government—from the cost of liability for defectively designed products.

As we noted above, there are better reasons for the defense. The factors controlling in *Feres* inquiries that do survive *Shearer* are (1) "whether the suit requires the court to second-guess military decisions," and (2) "whether the suit might impair essential military discipline." . . .

Shaw v. Grumman Aerospace Corp., 778 F.2d 736, 741-42 (11th Cir. 1985). The remainder of the Eleventh Cir-

cuit's opinion fashions a "military contractor defense" which is sensitive to the two factors of the "*Feres-Stencel* doctrine" which survive *Shearer,* and which is not bottomed upon any of the once-perceived rationales of the doctrine which are now "no longer controlling". In view of *Shearer,* it is difficult to justify *McKay* and its progeny any longer, and hard to fault the Eleventh Circuit's post-*Shearer* fine-tuning of the "military contractor defense" in this case.

One other Circuit has decided the issue presented here after *Shearer*—in *Bynum v. FMC Corp.*, 770 F.2d 556 (5th Cir. 1985). Although Grumman and its amici have lumped *Bynum* with *McKay* and its progeny, a fair reading of *Bynum* will reveal that it is not inconsistent with the Eleventh Circuit's opinion in this case. Like the Eleventh Circuit's opinion in this case, the Fifth Circuit's opinion in *Bynum* recognizes that the "military contractor defense" must rest on a narrower foundation after *Shearer*:

> Since *Stencel,* it has become clear that the third factor described above is the principal justification for the *Feres-Stencel* doctrine. Most recently, for example, in *United States v. Shearer,* ..... U.S. ....., 105 S. Ct. 3039, / L. Ed.2d 38 (1985), the Supreme Court stated explicitly that the other factors mentioned in the *Feres* and *Stencel* decisions were "no longer controlling." . . . Rather, to the *Shearer* Court, the central questions have become "whether the suit requires the civilian court to second-guess military decisions and whether the suit might impair essential military discipline." . . .

770 F.2d at 562. The Fifth Circuit thereafter "adopt[ed] the *McKay* test"—but its adoption of the test was care-

fully qualified by addition of the phrase "at least insofar as it applies to the circumstances of the instant case". 770 F.2d at 567.

The "circumstances" in *Bynum* were far different than the circumstances in *McKay*. In *Bynum*, the *Government* designed the product in issue, and the "innocent contractor" (770 F.2d at 566) merely manufactured it according to the Government's design specifications. As a result, *McKay* was followed on the facts in *Bynum*, but the Court expressly left open the question of whether mere "approval" of a contractor's design by the Government would be sufficient to support the defense—and it opined in dictum that it would not:

> At least with respect to the circumstances of this case, we think that the *McKay* formulation of the government contractor defense . . . substantially reflects the pertinent federal interests. To establish the government contractor defense, a military contractor must first demonstrate that the government is immune from liability under the *Feres-Stencel* doctrine. . . . Second, the military contractor must prove that the government established reasonably precise specifications for the allegedly defective military equipment and that the equipment conformed to those specifications. *This element makes clear that federal law provides no defense to the military contractor* that mismanufactures military equipment or *that is itself ultimately responsible for the design defect.*[23] Finally, it must be shown that the military contractor warned the government about errors in the government specifications or dangers involved in the use of the equip-

ment that were known to the contractor but not to the government. . . .

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23. Courts and commentators disagree over the extent to which the government must participate in generating the design specifications of military equipment before the government contractor defense would be applicable. . . . *We need not address this issue.* Before the district court, both parties stipulated that the product at issue here "was manufactured in accordance with precise design specifications furnished by the United States government." . . . This certainly is enough to satisfy the requirement.

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770 F.2d at 574 (emphasis supplied). In our judgment, this reformulation of the *McKay* test (which was obviously motivated by this Court's reformulation of the "*Feres-Stencel* doctrine" in *Shearer*) is perfectly consistent with the Eleventh Circuit's opinion in this case—and both Courts would have decided the two cases in exactly the same way.

In short and in sum, the "*Feres-Stencel* doctrine" has recently been clarified by this Court in a way that renders *McKay* and its pre-*Shearer* progeny no longer defensible. The courts which have decided the issue presented here after *Shearer* have recognized this, and it is likely that courts considering the issue in the future will reach the same conclusion. *See, e.g., Johnson v. United States,* 749 F.2d 1530 (11th Cir. 1985), *approved on en banc reh'g,* 779 F.2d 1492 (11th Cir. 1986) (in which the Eleventh Circuit sitting en banc held that, in light of *Shearer,* the *Feres* doctrine no longer barred suit by a serviceman against the Government for the negligence of one of its civilian agencies).

Because the holding of the Eleventh Circuit's opinion in the instant case is directly responsive to this Court's strong signal in *Shearer,* the apparent conflict which it

has created has already been essentially resolved, and there is therefore no need for this Court to intervene to repeat what it has already made clear in *Shearer*. At the very least, the issue presented here deserves further exploration by the lower courts in light of *Shearer*, so that this Court has the benefit of a thorough analysis of the issue upon its new foundation before resolving it with finality. For both of these reasons, it is respectfully submitted that the petition for writ of certiorari should be denied.

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Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS, ELEVENTH CIRCUIT

Reply Brief of Petitioner

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RULE 28.1 LISTING

A complete listing in conformance with Supreme Court Rule 28.1 was included in the Petition for *Certiorari*.

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ARGUMENT

The Respondent's Brief in Opposition reinforces the grounds set forth in the Petition for Writ of *Certiorari* for granting the Writ, namely that this Court should grant *certiorari* in this case because of an unresolved conflict among the Circuits with respect to the controlling issue of the military contractor defense. Furthermore, this Court should grant *certiorari* to resolve the nationally important issue of whether the judiciary should second-guess the judgment of the United States Military in approving the design of a military weapons system it has selected for use.

I. RESPONDENT CONCEDES A CONFLICT AMONG THE CIRCUITS ON THE CONTROLLING ISSUE OF THE MILITARY CONTRACTOR DEFENSE.

On Page 7 of the Respondent's Brief in Opposition, Respondent admits that there is a conflict among the Circuits concerning the elements of the military contractor defense. For this reason alone, as set forth in Supreme Court Rule 17.1(a), *certiorari* should be granted to review the decision of the Eleventh Circuit Court of Appeals in this case which created the conflict.

II. THE CIRCUIT CONFLICT WAS NOT RESOLVED BY *SHEARER*.

Respondent contends that the conflict among the Circuits was resolved by this Court's decision in *U.S. v. Shearer*, U.S. , 105 S.Ct. 3039 (1985). However, *Shearer* did not even address the issue of the military contractor defense. It therefore resolved none of the conflict between the uniform holdings in the Ninth, Third, Fifth and Seventh Circuits, following the Ninth Circuit's decision in *McKay v. Rockwell International Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043, 104 S.Ct. 711 (1984), and the Eleventh Circuit's opinion in this case, which declined to follow *McKay*.

Respondent relies upon this Court's *dictum* in footnote 4 in *Shearer*. In that note, this Court stated that two factors underlying this Court's holding in *Feres v. U.S.*, 340 U.S. 135, 71 S.Ct. 153 (1950)—that the government's duty to supervise servicemen should not depend on the local law of

the various states, and that a serviceman's dependents are entitled to statutory veterans benefits—were "no longer controlling." 105 S.Ct. 3039 at 3043, n.4. Respondent seeks to elevate that statement to a pronouncement that one rationale for the *McKay* decision—that government contractor liability would subvert the *Feres-Stencel* rule since the cost of accidents would be passed to the government—is no longer valid. Even assuming that to be the intent of footnote 4 in *Shearer,* which Petitioner disputes, *Shearer's* focus on judicial second-guessing of military decision-making reinforces the other rationales for *McKay,* which Respondent ignores in his Brief, and with which the Eleventh Circuit in this case specifically disagreed.

McKay's rationale that "to hold military suppliers liable for defective designs where the United States set or approved the design specifications would thrust the judiciary into the making of military decisions," 704 F.2d 444 at 449, was reinforced by *Shearer.* Likewise, *McKay's* rationale that the military contractor defense allows government contractors "to push technology towards its limits" thereby incurring "risks beyond those that would be acceptable for ordinary consumer goods," 704 F.2d 444 at 450, remains as a compelling justification for the *McKay* military contractor defense. Finally, the fact that a military contractor defense "provides incentives for suppliers of military equipment to work closely with and to consult the military authorities in the development and testing of equipment," 704 F.2d 444 at 450, also is reinforced by the *Shearer* decision. The Eleventh Circuit in this case specifically disagreed with the latter two rationales for *McKay. Shaw v. Grumman Aerospace Corp.,* 778 F.2d 736 at 743 (11th Cir. 1985). Thus, a clear conflict remains between the *McKay* version of the military contractor defense followed by the Ninth, Third, Fifth and Seventh Circuits, and the *Shaw* version enunciated by the Eleventh Circuit in this case.

III. RESPONDENT ADMITS THAT THERE IS A CONFLICT IN THE CIRCUITS ON THE CONTROLLING ISSUE OF THE MILITARY CONTRACTOR DEFENSE EVEN AFTER *SHEARER.*

Perhaps the most comprehensive discussion of the military contractor defense is contained in the Fifth Circuit decision of *Bynum v. FMC Corp.*, 770 F.2d 556 (5th Cir. 1985). As Respondent recognizes, that case was decided after this Court's decision in *Shearer,* and followed the *McKay* version of the military contractor defense. Therefore, Respondent admits that a conflict among the Circuits continues even after *Shearer.* For that reason, this Court should grant *certiorari* to review the Eleventh Circuit's opinion in this case, which created the conflict.

IV. RESPONDENT FAILED TO REBUT PETITIONER'S SHOWING THAT *CERTIORARI* SHOULD BE GRANTED TO RESOLVE THE NATIONALLY IMPORTANT ISSUE OF WHETHER THE JUDICIARY SHOULD SECOND-GUESS THE JUDGMENT OF THE UNITED STATES MILITARY IN APPROVING THE DESIGN OF A MILITARY WEAPONS SYSTEM IT HAS SELECTED FOR USE.

In its Petition at pp. 7-10, Petitioner showed that *certiorari* should be granted in this case pursuant to Supreme Court Rule 17.1(c) in order for this Court to resolve the nationally important issue of whether the judiciary should be allowed to second-guess the judgment of the military in approving the design of a weapons system it has selected for use. Respondent failed even to respond to that portion of the Petition, and therefore has failed to rebut Petitioner's showing. *Certiorari* should be granted in this case in order to resolve that issue, as well as to resolve the conflict among the Circuits on the military contractor defense.

VI. CONCLUSION.

For all of the foregoing reasons, as well as for the reasons set forth in the Petition for Writ of *Certiorari* previously filed by Petitioner, Petitioner respectfully requests that this Court

grant *certiorari* to review the decision of the Eleventh Circuit Court of Appeals in this case.

Respectfully submitted,

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RULE 28.1 LISTING

A complete listing in conformance with Supreme Court Rule 28.1 was included in the Petition for *Certiorari*.

ARGUMENT

I. Recent Decisions of The Fourth Circuit Court of Appeals Reinforce The Conflict Among The Circuits Which Should Be Resolved By This Petition

The United States Court of Appeals for the Fourth Circuit recently decided three cases which directly conflict with the holding of the Eleventh Circuit in this case. In *Tozer v. LTV Corp.*, 792 F.2d 403 (4th Cir., May 27, 1986), *Dowd v. Textron, Inc.*, 792 F.2d 409 (4th Cir., May 27, 1986) (*cert.* applied for), and *Boyle v. United Technologies Corp.*, 792 F.2d 413 (4th Cir., May 27, 1986), the Fourth Circuit Court of Appeals rejected the *Shaw* decision and held that "the government contractor defense shields the contractor from liability for design defects under either a strict liability or a negligence theory when the government has approved reasonably detailed specifications . . . ." *Tozer*, *supra* at 404. The Fourth Circuit thus has joined the ranks of all of the Circuits other than the Eleventh Circuit who have addressed the issue in following the test for the government contractor defense set forth by the Ninth Circuit in *McKay v. Rockwell International Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043, 104 S.Ct. 711 (1984). The Fourth Circuit's decisions also emphasize that, contrary to the Respondent's suggestion, the Circuit conflict remains unresolved after this Court's decision in *U.S. v. Shearer*, U.S. , 105 S.Ct. 3039 (1985).

II. The Recent Fourth Circuit Decisions Reinforce The Need For This Court To Resolve The Important Question of Whether The Judiciary Should Second-Guess The Judgment of The United States Military In Approving The Design of A Military Weapons System It Has Selected For Use.

Petitioner's showing in its Petition that this Court should grant *certiorari* in this case to resolve the nationally important issue of whether the judiciary should be allowed to second-guess the judgment of the military in approving the design of a weapons system it has selected for use was not

rebutted by the Respondent in its response. The recent Fourth Circuit decisions in *Tozer*, *Dowd*, and *Boyle*, *supra*, all emphasize the dangers of the judicial second-guessing of military decisions engaged in by the United States District Court for the Southern District of Florida and affirmed by the Eleventh Circuit in this case. Addressing a very similar factual situation, the Fourth Circuit in *Tozer* stated that, "[i]t is difficult to imagine a more purely military matter than . . . the design of a sophisticated reconnaisance craft that was flying, on the day of Tozer's death, some 50 to 75 feet above the surface of the water at a speed of 500-550 nautical miles per hour." *Tozer*, *supra* at 405-406. *Tozer* specifically rejected the opinion of the Eleventh Circuit in this case, and held that courts should not make military judgments such as those made by the Eleventh Circuit in this case, whatever a plaintiff's theory of recovery. *Tozer*, *supra* at 406; *accord*, *Dowd*, *supra*; *Ellis*, *supra*.

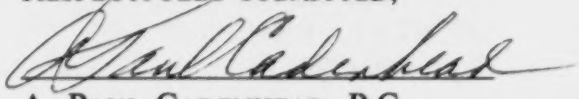
Since the record is clear that the design of the aircraft in this case was approved by the Navy, including the testing and approval of prototypes, *Shaw v. Grumman Aeorspace Corp.*, 593 F.Supp. 1066 at 1070-1071, ¶¶ 36 and 38 (S.D. Fla. 1984), that the Navy approved the design of the retrofit of aircraft with self-retaining bolts after several incidences attributable to the alleged design defect in this case in an effort to prevent future incidents, *id.* at 1073, ¶ 76, and that the Navy had over twenty years of experience with the aircraft at the time of the accident in this case, Grumman proved the military contractor defense as recognized by the Fourth Circuit in *Tozer*, *Dowd* and *Boyle*, and as followed by all of the Circuits which have addressed the issue. This Court should grant *certiorari* in this case to resolve the issue of judicial second-guessing of military decisions on the design of military equipment, which was first engaged in by the Eleventh Circuit in this case.

III. Conclusion.

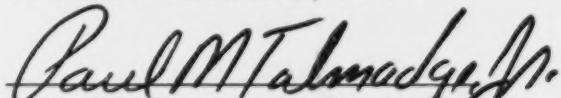
For all of the foregoing reasons, as well as for the reasons set forth in the Petition for Writ of *Certiorari* and Reply Brief previously filed by Petitioner, Petitioner respectfully

requests that this Court grant *certiorari* to review the decision of the Eleventh Circuit Court of Appeals in this case.

RESPECTFULLY SUBMITTED,



A. PAUL CADENHEAD, P.C.



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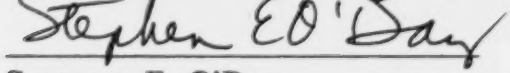

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CERTIFICATE OF SERVICE

I hereby certify that I am a member of the Bar of this Court, and that three (3) copies of the foregoing SUPPLEMENTAL BRIEF OF PETITIONER were served on September 29, 1986, by United States Mail, first class, with proper postage prepaid and affixed, on all parties required to be served as follows:

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Dated this 29th day of September, 1986.

Paul M. Talmadge Jr.

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Supreme Court, U.S.
FILED
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CLERK

No. 85-1529

In the Supreme Court of the United States

OCTOBER TERM, 1986

GRUMMAN AEROSPACE CORPORATION, PETITIONER

v.

EDWIN LEES SHAW, AS PERSONAL REPRESENTATIVE OF THE ESTATE OF GARY SCOTT SHAW, DECEASED

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

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BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

This brief is submitted in response to the Court's invitation to the Solicitor General to express the views of the United States.

STATEMENT

1. Introduction

This case arises from the crash of a Navy jet aircraft in the Pacific Ocean seconds after its take-off from an aircraft carrier. The aircraft was an A-6—an all-weather, carrier-based, attack airplane that has been, since its deployment in the 1960s, "the mainstay of the carrier-based Naval air attack fleet" (Pet. App. 1-2). The pilot of the aircraft, Navy Lt. J.G. Gary S. Shaw, was killed in the crash. It is now undisputed that the cause of the crash was the failure of the plane's longi-

tudinal flight control system.[1] *Id.* at 2-4. Shaw's father sued Grumman, alleging that its design of the longitudinal flight control system was defective. Grumman defended in part by asserting the military contractor defense.

2. Factual Background

In 1957, petitioner was selected by the United States Navy, after competitive bidding, to produce the A-6 attack aircraft. Pet. App. 2-8. Testimony at trial indicated that the Naval weapons procurement process, presently and as in effect at that time, involves considerable interaction and negotiation between NAVPRO,[2] a unit of the Navy's Naval Air System Command, and the contractor concerning the ultimate design of a particular weapons system. Formal approval by the Navy of the contractor's proposed specifications is necessary at several stages, beginning after selection of the contractor[3] and continuing through the final production process.

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[1] The longitudinal flight control system is the means by which a pilot alters the position of the aircraft's horizontal stabilizer, thus allowing the pilot to steer the aircraft up and down. Pet. App. 1-2.

[2] NAVPRO is a division of the Naval Air System Command. The division contains between 100 and 200 persons with technical and engineering backgrounds. According to trial testimony, onsite NAVPRO personnel closely monitor the development of detailed specifications by the manufacturer for inclusion in the weapons' contract, and subsequently the quality of the aircraft actually produced by the manufacturer, insuring conformity with the appropriate drawings and specifications. Tr. II-166.

[3] The selection process begins with the issuance by the Navy of a Specific Operations Requirement, which describes generally the type of equipment that the Navy wishes to acquire. Interested manufacturers are required to submit proposals that describe the operational requirements in more detail, and that provide tentative cost information, production schedules, and the like. These proposals are evaluated by the Naval Air System Command, both for their technical quality and for cost aspects. On the basis of this evaluation, the contractor is selected to produce the aircraft. Tr. III-6.

Following selection of a contractor to build a weapons system, the Navy issues an initial general specification describing the type of weapons system sought. The contractor is then required to develop and propose detailed specifications for inclusion in the contract that flesh out the general specifications set forth by the Navy.[4] These detailed specifications, which are submitted to NAVPRO for review and formal approval, reflect informal agreements reached as a result of continuous consultation and negotiation between the contractor and NAVPRO (Tr. III-6). Upon approval, they are made line items in the contract and can not be changed without the approval of NAVPRO (Tr. III-12).

After the contract is completed, the contractor is required to develop and propose a further series of detailed design specifications to the Navy. These specifications include assembly and installation drawings and even "the detail drawings from which the company would manufacture the parts" (Tr. III-12 to 13). In addition, these specifications set forth plans for the various tests that the system is to undergo. Again, NAVPRO's formal approval of these specifications is mandatory before the contractor can proceed with manufacture of the system or any of its parts (Tr. III-17).

After NAVPRO approves the plans, the contractor is generally required to manufacture several prototypes in accordance with the plans. These prototypes are tested by both the contractor and Navy personnel (Tr. III-19), and, upon final approval, the contractor is authorized to proceed with production.

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[4] For example, the detailed specifications prepared by petitioner for inclusion in the A-6 contract included, among other things, information relating to engine type, cruise range, mission requirements, carrier suitability requirements, and other details associated with "the landing gear, flight control systems, hydraulic systems, electrical systems, * * * armament * * *, the location of equipment, cockpit, cockpit instrumentation, * * * [and] information about the structural integrity requirements, fatigue life" (Tr. III-7).

Following the deployment of the A-6, six accidents occurred that were thought to have been caused by a failure in the bolts that connected the various mechanical elements of the longitudinal flight control system. Pet. App. 1-2. Petitioner—prohibited by its contract from deviating from established design specifications—recommended to the Navy that this problem be treated by replacing the bolts in the flight control system with special "self-retaining bolts." *Ibid.* For fiscal reasons, the Navy delayed installing such bolts for several years, until 1978. *Ibid.* The first of two phases of bolt retrofitting had been completed on the flight control system of the A-6 aircraft that Lt. Shaw was piloting in this case.[5]

3. Proceedings Below

a. After a bench trial, the district court found petitioner negligent in the "design, manufacture, and testing" of the A-6's longitudinal flight control system (Pet. App. 2-15, para. 86), concluding that "[t]he ultimate defect * * * was its total lack of redundancy or compensating provisions." *Id.* at 2-9, para. 45. The court noted that "[r]edundancy is a basic element of design," and that "[g]eneral aviation aircraft and commercial transport aircraft all have redundancy in longitudinal flight control systems." *Id.* at 2-10, para. 53. It found that dual controls could have been installed to provide redundancy, although it noted that such a design would result in "a weight penalty and increased complexity" (*id.* at 2-11, para. 56), and further suggested that "[i]nstallation of a locking device to prevent random migration of the stabilator is within the realm of feasibility" (*id.* at 2-12, para. 70). The court added that

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[5] Testimony at trial indicated that, prior to Lt. Shaw's accident, there had been no known failure of an A-6 flight control system after the installation of any self-retaining bolts. Tr. III-24, 78-79.

"the A-6 * * * had no warning device to alert the crew" that the system had failed. *Id.* at 2-9, para. 47.[6]

Applying the elements of the military contractor defense as set out in *McKay* v. *Rockwell International Corp.*, 704 F.2d 444, 451 (9th Cir.), cert. denied, 464 U.S. 1043 (1983) (quoted at Pet. App. 1-14 to 1-15), the district court noted that " 'mere Navy approval of the detailed design specifications and drawings developed by Grumman does not make the government contractor defense available to it.' " Pet. App. 2-16, para. 93. It concluded that Grumman had failed to establish the elements of the military contractor defense set out in *McKay* for a number of reasons, including its failure to warn the Navy "about the dangers involved in the use of the [aircraft] that were known to [Grumman] but not to the [Navy]."[7] *Id.* at 2-16, para. 91. The court awarded the plaintiff $840,556.75. *Id.* at 2-18, para. 95.

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[6] The district court also found that petitioner was negligent in proposing to the Navy the solution to the disconnect problem later adopted by the Navy—the installation of self-retaining bolts—again, for failing to incorporate redundant, back-up systems into the flight control system. Pet. App. 2-10, para. 48.

[7] The court found that "Grumman was aware of the lack of redundancy" in the longitudinal flight control system and the lack of warning to the crew in the event of a failure of that system. Pet. App. 2-10, para. 50. It further found that the Navy examined and approved petitioner's specifications for the A-6 (*id.* at 2-8), and noted that petitioner had stated in a "failure effects analysis" performed at the Navy's direction before the A-6 was constructed that, since there was no backup longitudinal flight control system, any failure in the system " 'is potentially fatal' " (*id.* at 2-11, para. 77). The court concluded that "[w]hile the lack of redundancy may or should have been apparent to the Navy, it had neither the design staff nor the expertise to comprehend the catastrophic potential and probability of the disconnect problem. * * * The Navy was not aware of the defect in design at the time it approved the detailed specifications submitted by Grumman" (*id.* at 2-13, para. 77; 2-14, para. 80). And the court also found that "[o]nce aware of the defect due to the history of accidents with the aircraft, the Navy * * * justifiably rel[ied] on Grumman's advice that the problem with the longitudinal flight control system would be solved by installation of the self-retaining bolts." *Id.* at 2-13, para. 76.

b. The court of appeals affirmed. Declaring itself "not satisfied" (Pet. App. 1-16) with the elements of the military contractor defense that had been identified by other circuits,[8] the court "fashion[ed] a test with a somewhat different focus" (Pet. App. 1-18). The court held that the military contractor defense is available when either of two conditions obtain (Pet. App. 1-18 to 1-19 (emphasis in original)):

> A [military] contractor may escape liability only if it affirmatively proves:
>
> > (1) that it did not participate, or participated only minimally, in the design of those products or parts of products shown to be defective; *or* (2) that it timely warned the military of the risks of the design and notified it of alternative designs reasonably known by the contractor, *and* that the military, although forewarned, clearly authorized the contractor to proceed with the dangerous design.

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[8] The court specifically distinguished its approach from that taken by the Ninth Circuit in *McKay* v. *Rockwell International Corp.*, 704 F.2d 444, 451, cert. denied, 464 U.S. 1043 (1983) (as quoted at Pet. App. 1-14 to 1-15):

> [A] supplier of military equipment is not subject to section 402A [strict] liability for a design defect where: (1) the United States is immune from liability under *Feres* [v. *United States*, 340 U.S. 135 (1950)] and *Stencel* [*Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977)], (2) the supplier proves that the United States established, or approved, reasonably precise specifications for the allegedly defective military equipment, (3) the equipment conformed to those specifications, and (4) the supplier warned the United States about patent errors in the government's specifications or about dangers involved in the use of the equipment that were known to the supplier but not to the United States.

It also stated that it was departing from two other versions of the military contractor defense, as enunciated in *In re "Agent Orange" Product Liability Litigation*, 534 F. Supp. 1046 (E.D.N.Y. 1982), cert. denied, 465 U.S. 1067 (1984), and *Koutsoubos* v. *Boeing Vertol*, 755 F.2d 352 (3d Cir. 1985).

It made clear that in determining the types of risks about which contractors must warn the military, the standards are to be drawn from the practices of the aircraft industry as a whole, including manufacturers of products for civilian use. *Id.* at 1-19 n.17. The court further emphasized that the military's approval of design specifications must be clearly responsive to that warning. *Id.* at 1-19 to 1-20.

The court of appeals focused on two allegations of design defects: (1) the failure to provide a redundant longitudinal control system; and (2) the failure to correct the disconnect problem with the proposal for self-retaining bolts. Pet. App. 1-20 to 1-21. Applying its test to petitioner, the court of appeals found that petitioner did not satisfy the first prong of its test because petitioner's participation in the design of the A-6 and in the proposal to install self-retaining bolts was not minimal. Pet. App. 1-21.

With regard to the failure to incorporate a redundant control system, the court of appeals held that "Grumman was both actually aware and reasonably should have been aware, given good design practice, of the risk of non-redundancy" (*id.* at 1-21). Although the court of appeals did not resolve the ambiguity of the district court's opinion concerning the Navy's awareness of the non-redundancy,[9] it adhered to the lower court's findings that the "Navy did not have sufficient expertise to render a warning of that risk unnecessary," and that petitioner had "failed to warn the Navy sufficiently of the danger inherent in the non-redundant longitudinal control system" (*id.* at 1-21 to 1-22).

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[9] Compare Pet. App. 2-13, para. 77 ("lack of redundancy may * * * have been made apparent to the Navy"), *id.* at 2-13, para. 76 ("[o]nce aware of the defect due to the history of accidents with the aircraft, the Navy * * *"), and *id.* at 2-16, para. 91 ("[o]nce aware of the design defects, the Navy * * *") with *id.* at 2-14, para. 80 ("[t]he Navy was not aware of the defect in design at the time it approved the detailed specifications submitted by Grumman").

With regard to the installation of the self-retaining bolts, the court of appeals noted that the district court found that "the Navy relied on Grumman's advice that these would solve the problem. This may be read as a finding of a failure to warn that the bolts would not correct the underlying defect" (Pet. App. 1-22).[10]

For these reasons, the court held that the Navy's formal approval of both the initial design of the A-6 and the design changes relating to the self-retaining bolts, "did not constitute the sort of informed military decision to accept the risk of a dangerous product to which this Court must defer under separation of powers doctrine" (Pet. App. 1-22).

DISCUSSION

The United States usually contracts to have its goods produced by the private sector. If the United States contracts for a product with express and mandatory specifications, the manufacturer cannot be held to account for executing that directive. *Yearsley* v. *W.A. Ross Construction Co.*, 309 U.S. 18 (1940). The manufacturer is an agent of the government, acting pursuant to its command. *Murray's Lessee* v. *Hoboken Land & Improvement Co.*, 18 How. (59 U.S.) 272, 283 (1854).

In the design and manufacture of military weapons, the relation between government and manufacturer is almost always more complex. The production of goods will involve design, performance, and production criteria,

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[10] It is worth noting that the district court's finding that the solution proposed by Grumman did not solve the problem seems not fully logical. The court found that: (1) Grumman proposed replacing all the bolts in the control system; (2) the Navy, after some years of delay, issued an order requiring the bolts to be replaced in two phases; (3) the A-6 at issue in this case had undergone only the first phase of bolt replacement, focusing on those bolts judged the most susceptible to failure. Pet. App. 2-8. Although this A-6 had not had all the bolts in its control system replaced with self-retaining bolts, the court concluded that "[t]he Shaw accident[s] demonstrates that the new bolts did not correct the defect in design" (*ibid.*).

some of which may be specified by the government in great detail, some in outline only, and some left to the unfettered discretion of the manufacturer. Moreover, even when these directives are mandatory, the manufacturer may have played a significant role in the development and formulation of the specifications. Indeed, as the court of appeals observed, "the more closely the contractor and the military work together, the more difficult it is to determine exactly who made design decisions" (Pet. App. 1-14).

A number of considerations have led courts to recognize, as a matter of federal common law,[11] a special defense available to the manufacturers of products essential to the military mission. A driving force behind this military contractor defense is the effect of litigation in calling into question military judgments concerning equipment safety and related matters. The courts have recognized that, at least under certain circumstances, "a trial between a serviceman and a military contractor in which government specifications are at issue would inevitably implicate the same concerns that underlie the Supreme Court's *Feres* [v. *United States*, 340 U.S. 135 (1950)] and *Stencel* [*Aero Engineering Corp.* v. *United*

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[11] In this case, because the action has been brought under the Death on the High Seas Act, 46 U.S.C. 761, "federal common law" amounts to no more than the court's construction of Congress's intent in passing that Act. However, in actions where claims are premised upon state tort law, federal common law is also appropriate to determine the extent of the military contractor defense. For, as the Court has noted in *Stencel Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977), the relationship between the government and its suppliers of ordnance is certainly no less "distinctively federal in character" than the relationship between the government and its soldiers (431 U.S. at 672). Thus, a suit by a serviceman against one of the government's suppliers of ordnance gives rise to uniquely federal interests sufficient to warrant the imposition of federal law. *Bynum* v. *FMC Corp.*, 770 F.2d 556, 571 (5th Cir. 1985). See *Clearfield Trust Co.* v. *United States*, 318 U.S. 363, 366-367 (1943).

States, 431 U.S. 666 (1977)] decisions." *Tozer* v. *LTV Corp.*, 792 F.2d 403, 405-408 (4th Cir. 1986); *Bynum* v. *FMC Corp.*, 770 F.2d 556, 565 (5th Cir. 1985); *Tillett* v. *J. I. Case Co.*, 756 F.2d 591, 597 (7th Cir. 1985); *Koutsoubos* v. *Boeing Vertol*, 755 F.2d 352, 354-355 (3d Cir. 1985); *McKay*, 704 F.2d at 449.

The court of appeals here recognized the essence of these concerns in concluding that "military risk-taking—where it involves products supplied by contractors—is shielded from judicial scrutiny by the military contractor defense, provided only that it is knowing and purposeful." Pet. App. 1-13. In its precise formulation of the test, and the application of that test to the facts of this case, however, the court of appeals here has departed significantly from the approach taken by other courts. The net effect of these legal and factual departures is to restrict the military contractor defense to a very narrow class of cases, and to place upon it conditions precedent which will substantially disrupt the weapons procurement process. In view of the great attention which has been paid to the decision below by military contractors (see Brief of Amici Curiae), and the predictable ways in which it threatens to render less effective and efficient the existing processes for weapons design, development, and procurement, review by this Court is justified.

1. In *Feres* v. *United States*, 340 U.S. 135 (1950), the Court declined to construe the Federal Tort Claims Act as authorizing suits for injuries to members of the armed forces sustained in the course of duty. In reaffirming *Feres* recently, the Court noted that it seemed best explained by the " 'peculiar and special relationship of the soldier to his superiors, [and] the effects of the maintenance of such suits on discipline ***.' " *Chappell* v. *Wallace*, 462 U.S. 296, 299 (1983) (quoting with approval from *United States* v. *Muniz*, 374 U.S. 150, 162 (1963)).[12]

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[12] See, *e.g.*, *In re Grimley*, 137 U.S. 147, 153 (1890):

> An army is not a deliberative body. It is the executive arm. Its law is that of obedience. No question can be left open as

In *Stencel Aero Engineering Corp.* v. *United States*, 431 U.S. 666 (1977), the Court declined to construe the Federal Torts Claims Act as authorizing indemnification suits brought against the United States by contractors that have been sued by servicemen, on the ground that such suits would have the same adverse consequences as direct suits, even though the serviceman was not nominally a party-plaintiff (431 U.S. at 673):

> [W]here the case concerns an injury sustained by a soldier while on duty, the effect of the action upon military discipline is identical whether the suit is brought by the soldier directly or by a third party. The litigation would take virtually the identical form in either case, and at issue would be the degree of fault, if any, on the part of the Government's agents and the effect upon the serviceman's safety. The trial would, in either case, involve second-guessing military orders, and would often require members of the Armed Services to testify in court as to each other's decisions and actions.

In formulating the military contractor defense, courts have likewise recognized that the substitution of one party—even where a private party is susbstituted for the United States—does little to eliminate the deleterious consequences of the litigation for military discipline:

> Litigation involving defective design in military products would take the identical form regardless of whether the named defendant happens to be the government or the military contractor. In either case, members of the armed services would be allowed to question military decisions and obtain relief from actions of military officials.

Bynum v. *FMC Corp.*, 770 F.2d at 565. This follows from the fact that "[m]ilitary contractors ordinarily

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to the right of command in the officer, or the duty of obedience in the soldier.

See also *Parker* v. *Levy*, 417 U.S. 733, 758 (1974); *Greer* v. *Spock*, 424 U.S. 828, 843-44 (1976) (Powell, J., concurring).

work so closely with the military * * * that it is nearly impossible to contend that the contractor defectively designed a piece of equipment without actively criticizing a military decision." *Tozer* v. *LTV*, 792 F.2d at 406. The design alternatives explored in the context of military contracting necessarily depend upon uniquely military considerations which may require foregoing a margin of safety in order to satisfy other mission criteria. As the Fifth Circuit noted in *Bynum*, 770 F.2d at 569:

> Often dangerous designs [of military weapons] must be used in the military context to meet the exigencies of our national defense, and even military equipment that is relatively safe for every day use may have to be operated on occasion under dangerous conditions or in a manner creating a high risk of harm.

Similarly, it is necessary, given the nature of the military mission, "to push technology towards its limits and thereby to incur risks beyond those that would be acceptable for ordinary consumer goods." *McKay*, 704 F.2d at 449-450.

Application of the court of appeals' decision in cases such as the present one will require judges, juries, and lawyers publicly to explore the nuances of specific contracting decisions in a way highly disruptive of the procurement process. The military contractor defense recognizes that this is not their proper function. "The complex, subtle, and professional decisions as to the composition, training, equipping and control of a military force are essentially professional military judgments, subject *always* to civilian control of the Legislative and Executive Branches." *Gilligan* v. *Morgan*, 413 U.S. 1, 10 (1973) (emphasis in original).

While a number of other policy justifications have been offered to buttress the military contractor defense,[13]

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[13] For example, a failure to adopt a military contractor defense would indirectly raise the cost of military weaponry: "military

we believe that its limits are properly defined by the *Feres-Stencel* concern to avoid judicial scrutiny of military decisionmaking, with the second-guessing and impairment of discipline that that entails.[14] We believe that the test enunciated by the Ninth Circuit in *McKay* (see n.8, *supra*), implements this limited objective in a balanced and effective manner. It requires, in addition to the immunity of the United States under *Feres* and *Stencel*, that the equipment conform to reasonably precise specifications which were established or approved by the United States, and that the contractor warned the United States about errors or dangers inherent in the product as specified which are known to the supplier but not to the United States. *McKay*, 704 F.2d at 451.

It is therefore clear and, we submit, appropriate, that the military contractor defense will apply only where the military has either established or approved the specifications that are alleged to have caused a serviceman's injury—so that military judgments are truly implicated. It is also a necessary condition of the defense that the military contractor warn the military about dangers

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suppliers, despite the government's immunity, would pass the cost of accidents off to the United States through cost overrun provisions in equipment contracts, through reflecting the price of liability insurance in the contracts, or through higher prices in later equipment sales." *McKay*, 704 F.2d at 449. The courts have also observed that, as in *Feres* and *Stencel*, recognition of the military contractor defense does not leave servicemen without a remedy for their injuries. "The Veterans' Benefits Act 'provides a swift, efficient remedy for the injured serviceman.'" *Tozer* v. *LTV*, 792 F.2d at 407 (quoting *Stencel Aero Engineering Corp.*, 431 U.S. at 673).

[14] This is not to suggest that the constitutionally-based government-agent defense, articulated in *Yearsley*, is or can be so limited. If the Executive or Legislative Branches give express and constitutionally authorized directions to their agents, "whatever the immunities of the sovereign, the agent thereafter cannot be pursued." *The Paquete Habana*, 189 U.S. 453, 465 (1903) (Holmes, J.).

known to it as a result of performance of its contractual duties, but not known to the military. While the military is a sophisticated and competent participant in the process of design and manufacture, it is not always aware of all the risks that may be known to the contractor. The relationship between the military and its contractors is improved on the whole by a requirement that ensures that the information flowing from contractors to the military is as full and frank as is reasonably possible and that all risks and dangers known to contractors have been disclosed.

The court of appeals here went beyond these requirements in a manner narrowing the applicability of the defense to a degree which will prevent achievement of its primary objectives. For under *Shaw*, except in the rare instance where the contractor plays essentially no part in the design of the product,[15] a military weapons contractor can be shielded from liability for design defects only if: (1) the contractor has warned the military not only of design risks and alternatives reasonably known as a result of full performance of the contract terms, but of those that should reasonably be known to the contractor under the standards of the industry, defined to include civilian as well as military producers of similar items; and (2) the military responds to this required warning with a "knowing approv[al]" that is

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[15] This first prong of the *Shaw* test will rarely if ever be a relevant factor in the military procurement process. The procurement of high-performance weapons' systems at the cutting edge of technology that are intended for highly sophisticated military missions demands that industry and government work together closely in the design, testing, and manufacture of the desired weapon: "The contractor and the military pool their expertise, matching the latest advances in military technology with the specific dictates of the mission." *Tozer* v. *LTV*, 792 F.2d at 407. Design criteria can only be specified with the absoluteness required by the first prong of the *Shaw* test in areas where technology is established and the capacities of manufacturers are settled and known.

"obviously related and responsive to the relevant warning." Pet. App. 1-8 to 1-20.

2. Adopting this standard of imputed knowledge substantially expands the responsibilities as well as the potential liability of a contractor. For under the *Shaw* test, a contractor's performance is measured by the design practices of manufacturers that produce similar or related products, whether for civilian or military consumption. In this case, the standard of design practice was derived from those of "the aircraft design industry * * * civilian or military" (Pet. App. 1-19 n.17).

Results under the *Shaw* test will diverge sharply from those resulting where the contractor is held to a standard of full contractual performance. For example, when a manufacturer of military aircraft has not engaged in the kind of testing or analysis that is normally engaged in by other portions of the aircraft industry and does not discover a latent defect that it would have thus discovered, it cannot avail itself of the military contractor defense under *Shaw* for suits concerning this defect.[16] Similarly, if a manufacturer of military aircraft has not advised the military of alternative designs that are typically employed in aircraft produced for civilian air transport, and that would render the aircraft safer, it may not, under *Shaw*, be able to invoke the military contractor defense if an accident results on account of the less safe feature.

The court of appeals' reference to the practices followed by manufacturers of other products ignores both

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[16] Apparently, the fact that the testing requirements for a particular weapon are specified in the procurement contract will not, under *Shaw*, affect this result. For testing specifications, like any other design specification, are arrived at after give and take between the contractor and the military. And the *Shaw* court emphasized that "[i]n fashioning a standard by which courts may measure responsibility for design judgments, we consciously avoid too sanguine a view of the usefulness of product 'specifications'" (Pet. App. 1-17).

the unique needs that underlie each weapons system and the nature of the military procurement process. Most weapons systems are devised with a specific tactical or strategic mission in mind, and time is often of the essence. Not only the precise specifications, but the time schedule of production and the type and number of tests conducted are bargained-for aspects of the contractual relationship. It is therefore not reasonable to judge a military contractor by standards applicable to contractors of commercially-marketed products. Rather, if a contractor supplies a product that conforms to detailed specifications approved by the military, the proper concern of a court must be directed toward whether the contractor has performed the testing and analysis required by its particular contract and given warning appropriate in light of the contract.

Application of the *Shaw* test will, therefore, provide military contractors with a strong incentive to engage in testing and safety evaluation beyond that required under the military contract. This will involve reevaluation by the contractors of the design specifications furnished (or approved) by the government, *Bynum* v. *FMC Corp.*, 770 F.2d at 576, which will, in turn, necessarily involve both delay and increased cost to the government. In significant respects, therefore, it amounts to judicial intrusion upon "decisions that are better left to the military and the political branches of government." *Ibid.*

That intrusion is well illustrated by comparing the reasoning of the court of appeals in *Shaw* with the recent decision of the Fourth Circuit in *Tozer* v. *LTV*, 792 F.2d 403 (1986), which applied the *McKay* version of the military contractor defense. In *Tozer*, the contractor had designed a hood for an aircraft engine; the hood was fastened with "camlocs." *Tozer*, 792 F.2d at 405. The plaintiffs contended that "usually many camlocs are installed for safety [and that the contractor] was negligent because it did not fasten the panel with redundant camlocs." *Ibid.* The court simply concluded that the mili-

tary had approved the design and the contractor did not fail to notify the military of dangers actually known to it and unknown to the military. 792 F.2d at 408. The *Tozer* court emphasized the dangers of importing civilian notions of safety and defect into military settings (792 F.2d at 406):

> While jurors may possess familiarity and experience with consumer products, it would be the rare juror —or judge—who has been in the cockpit of a Navy [aircraft] off the deck of a carrier on a low level, high speed fly-by maneuver. * * * What would pose an unreasonable risk to the safety of civilians might be acceptable—or indeed necessary—in light of the military mission of the aircraft. * * * Difficult choices, tradeoffs, and compromises inhere in military planning that simply find no analogue in civilian life.

The Fourth Circuit's rationale in *Tozer* reflects the obvious proposition that the mission of a carrier capable attack aircraft is far different from that of a civilian airliner. These different mission requirements lead to decisions regarding the design and construction of each that make intelligent comparison impossible. Such an approach stands in stark contrast to the reasoning of the court here, which judged the defectiveness of the original design by reference to general design practice and without regard to the serious "weight and complexity" consequences that would have resulted from redundancy.[17]

In summary, the imputing of knowledge based on a standard of care developed in contexts apart from military contracting has serious adverse effects on military procurement. It produces perverse incentives, inclining contractors to recommend or perform safety tests with

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[17] The court of appeals in *Shaw* further relied on petitioner's "failure to warn that the [retrofit] bolts would not correct the underlying defect," a fact of which it apparently should have been aware in light of the general defectiveness of the system as a whole. (Pet. App. 1-22.)

an eye to their own potential liability rather than military necessities. Contractors, feeling compelled to perform tests not required under the contract, might well increase their bids or, faced with such uncertainty, "be discouraged from bidding on essential military projects." *Bynum* v. *FMC Corp.*, 770 F.2d at 566.

In addition, contractors that do seek out (or are compelled to perform [18]) military weapons' contracts are given a natural incentive to avoid as much as possible all participation in the establishment of design criteria. For only by its lack of participation in creating the design criteria can the contractor satisfy the first prong of the *Shaw* test and avoid the great uncertainties imposed by the broadly formulated duty to warn. This may well be significantly disruptive of the cooperative joint enterprise by which most military weaponry is presently designed and produced.

Also, contractors will have an interest in establishing an elaborate and voluminous paper record, to document its warnings on every particular in which a military aircraft departs from the design of its civilian counterparts. If, to take this case as an example, it is necessary for contractors to warn the military about matters as inherently self-evident as the safety margin provided by a redundant flight control system, there are few military departures from civilian norms which do not so require. Such a voluminous record may reasonably be expected to obscure those matters upon which serious discussion between a contractor and the military ought to focus, to the detriment of the true safety of our nation's servicemen.

3. In addition to the requirements of warnings in a broad and uncertain range of situations not required

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[18] The Defense Production Act, 50 U.S.C. App. 2071(a) gives the Executive Branch authority to require a private contractor to accept military contracts.

under the *McKay* test, the *Shaw* test imposes as an additional condition precedent to the defense a requirement that the military approve the subject design in a manner "obviously related and responsive to the relevant warning"—no "blanket" approval will do.[19] Indeed, it goes yet a step further and allows consideration of evidence of the "military's own level of relevant knowledge and expertise," presumably as bearing on the informed and deliberate character of its concurrence in the design (Pet. App. 1-20).

Thus here, as with its definition of the warning requirement, the Eleventh Circuit has virtually ensured the creation of a new, mountainous paper record in connection with every procurement contract, and has made a practical and substantial alteration in the procurement process. In response to the contractor's incantation that one or the other particular system in an attack aircraft is not as safe as it would be if a redundant system were incorporated in the design, it appears that the military must similarly respond in words evidencing not only its desire to proceed nonetheless, but also its specific understanding of the defect being "waived" and its own expertise to make that judgment. Unless the military alters its procurement process in this way, under the *Shaw* rule contractors who perform the military's bidding will be accountable in tort.

This kind of case-by-case evaluation of the competence with which a particular military decision was made is a substantial intrusion upon military prerogatives as well as a potential burden to the weapons' procurement process. It is inappropriate for the courts to set themselves the task of determining how much attention must be given to safety risks by the military—or from whom the military must receive opinions—before a command deci-

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[19] "For the defense to obtain, the contractor must actually inform the military of the consequences of the latter's [*sic*] decision." Pet. App. 1-20 n.18.

sion to acquire a product in a given form is respected. Cf. *United States* v. *Shearer*, No. 84-194 (June 27, 1985), slip op. 6 (improper to require commanding officers "to stand prepared to convince a civilian court of the wisdom of a wide range of military * * * decisions.") The military—despite the court of appeals' disparagement of its expertise and competence—is a sophisticated participant in the design process, and "[w]hen to require additional testing of military equipment, and at what cost, are decisions that are better left to the military and the political branches of [the] government." *Bynum* v. *FMC Corp.*, 770 F.2d at 576.

Moreover, this requirement poses a serious potential threat to military discipline. In order to establish his right to relief, a serviceman-plaintiff will have an incentive to demonstrate that a military superior's judgment in a given circumstance was "unknowing." He will seek to establish that his military superiors lacked the competence to make the judgment they made and that, therefore, more disclosure on the part of the contractor was required than was given. Such a burden of proof will necessarily impact adversely on military discipline.

The court of appeals' elaboration of this knowing waiver requirement contracts sharply with the approach taken by other courts. In *Dowd* v. *Textron*, 792 F.2d 409 (1986), for example, the Fourth Circuit applied the *McKay* test in similar circumstances and concluded that the warning by a contractor of known defects was sufficient. No inquiry into why the military did or did not do what was recommended by the military contractor in that case was permitted or regarded as relevant: "What ever the reasons [for the Army's action or inaction], it is not up to the jury to second-guess this military judgment." *Ibid.* Only by reaching such a conclusion do courts appropriately avoid interference with military decisions about both the general nature of its procurement process and the specifications of particular weapons systems.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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In the Supreme Court of the United States

October Term, 1985

GRUMMAN AEROSPACE CORPORATION,
Petitioner,

v.

EDWIN LEES SHAW, As Personal Representative of the Estate of Gary Scott Shaw, Deceased,
Respondent.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

BRIEF AMICI CURIAE

Of Bell Helicopter Textron, Inc., General Dynamics Corporation, Lockheed Corporation, LTV Aerospace and Defense Company, McDonnell Douglas Corporation, Northrop Corporation, Rockwell International Corporation, United Technologies Corporation, Aerospace Industries Association of America, Inc., Electronic Industries Association, National Security Industrial Association and Shipbuilders Council of America in Support of Petition

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The amici curiae listed above file this brief pursuant to Rule 36.1 of the Rules of this Court. All parties have consented to the filing of this brief.

INTEREST OF AMICI CURIAE

Amici are eight corporations that are engaged in the manufacture of military weapons systems and four industry trade associations that collectively represent virtually every American manufacturer of military weapons systems used for national defense.[1] The members of the four trade associations have manufactured thousands of different military weapons systems, including aircraft, helicopters, naval vessels, amphibious vehicles, and armored weapons for branches of the United States military.

The eight corporate amici are among the major suppliers of military aircraft weapons systems used by the United States military. Approximately 80% of all military aircraft currently in the service of the United States military have been manufactured by amici. During the five year period 1980-1984, the eight corporate amici manufactured and delivered 3783 military aircraft to the United States military, or approximately 71% of all military aircraft weapons systems manufactured and delivered during that period. If petitioner Grumman's production is included, the number is increased to 78%.[2]

Amici work closely with the United States military in the development, design, and manufacture of military weapons for specific military missions. Prior to the decision of the Eleventh Circuit below, the courts of appeals had adopted an essentially uniform standard for the application of the military contractor defense. The Eleventh Circuit's decision deviates radically from that standard, however, and thereby raises serious questions about the

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1. A listing of the members of the four industry trade associations that are amici is attached as an Appendix.

2. The statistics cited are drawn from: International Institute for Strategic Studies, *The Military Balance 1985-1986* (1985).

ability of amici to produce weapons systems that address the needs of the military without incurring potential civil liability for injuries to servicemen resulting from alleged design defects. Accordingly, amici have a direct and substantial interest in the outcome of this action.

The activities of amici in designing and manufacturing military weapons systems are directly and substantially related to the national defense of the United States. These weapons systems are frequently transported great distances and may be deployed by the military at any location. Moreover, after delivery of the weapons systems to the military, amici have virtually no ability to influence the deployment, use, modification, or repair of the weapons systems by the military. As the law now stands, amici are subject to different standards for the military contractor defense based solely on the fortuity of where an accident occurs or where a suit is brought. Accordingly, amici have a direct and substantial interest in the articulation of a uniform national standard for application of the military contractor defense.

SUMMARY OF ARGUMENT

This case presents the question of whether the constitutional doctrine of separation of powers is violated when the judiciary second-guesses decisions of the United States military regarding the design and selection of weapons systems. The Eleventh Circuit's decision creates a direct conflict in the circuits on this issue and would endanger the close working relationship between the military and the manufacturers of weapons systems that is essential to the preservation and advancement of national defense.

The equipping of the United States military with military weapons systems has immediate and direct impact

upon the national defense. As such, "[t]he relationship between the Government and its suppliers of ordnance is . . . distinctively federal in character . . . ." *Stencel Aero Enginering Corp. v. United States*, 431 U.S. 666, 672 (1977). Within the federal system, "[t]he complex, subtle, and professional decisions as to the composition, training, equipping, and control of a military force are essentially professional military judgments, subject *always* to civilian control of the Legislative and Executive Branches." *Gilligan v. Morgan*, 413 U.S. 1, 10 (1973) (emphasis original). Under the separation of powers doctrine, "judges are not given the task of running the Army." *Orloff v. Willoughby*, 345 U.S. 83, 93 (1953).

The military contractor defense has evolved as a recognition by the federal courts that separation of powers principles preclude judicial evaluation of military decisions regarding the design and selection of weapons. The Third, Fifth, Seventh, and Ninth Circuits have embraced an essentially uniform standard for application of this defense, based largely upon the decision in *McKay v. Rockwell International Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984). The Eleventh Circuit's decision in this case, however, admittedly "turn[s] the assumption behind the *McKay* test on its head." *Shaw v. Grumann Aerospace Corp.*, 778 F.2d 736, 746 (11th Cir. 1985), *petition for cert. filed*, No. 85-1529 (Mar. 17, 1986). The Eleventh Circuit has adopted a markedly different standard for the defense and has thereby exposed military contractors to the unreasonable prospect of being subjected to different standards for the military contractor defense depending upon the location of an accident or the situs of litigation, despite the "distinctively federal" character of the relationship between the military contractor and the military.

In addition to constituting a radical departure from the decisions of all other courts of appeals, the *Shaw* test for the military contractor defense is unworkable and undermines the separation of powers doctrine upon which it is based. The first element of this alternative standard requires the contractor to demonstrate that it "participated only minimally" in the design of the weapons system, *Shaw*, 778 F.2d at 746, a requirement that is virtually impossible to satisfy given the reality of modern weapons systems design and procurement. The second element of the test requires the court to evaluate the contractor's advice and warnings to the military, taking "into account evidence that goes to the military's own level of relevant knowledge and expertise", *id.*, and further to evaluate the nature of the military's approval of the design. *Id.* In this manner, the *Shaw* test virtually mandates that the courts engage in precisely the type of detailed scrutiny of military decisions that the separation of powers doctrine precludes by allowing plaintiffs to hale military officers into court to testify about the military decision-making process.

Amici respectfully submit that this Court should grant the Petition for Writ of Certiorari in order to establish a uniform and workable standard for application of the military contractor defense.

REASONS FOR GRANTING THE WRIT

I. NATIONAL DEFENSE INTERESTS REQUIRE A UNIFORM STANDARD FOR THE MILITARY CONTRACTOR DEFENSE.

A primary tenet of American national defense in the forty years since World War II has been the maintenance of a balance of power throughout the world. The development, design, and deployment of state-of-the-art weapons systems have been, and remain, vital aspects of this national defense strategy. As the boundaries of scientific knowledge expand, "the United States is required by the exigencies of our defense effort to push technology towards its limits and thereby to incur risks beyond those that would be acceptable for ordinary consumer goods." *McKay v. Rockwell International Corp.*, 704 F.2d 444, 449-50 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).[3]

In recent years, the federal courts have recognized that the separation of powers doctrine sharply limits their power to scrutinize the military's decisions regarding the design of weapons systems. Every court of appeals that has considered the question has recognized that a military contractor defense exists and that, if a manufacturer of a military weapons system can establish certain facts regarding the military's role in the design or approval of the weapons system, the federal courts must not second-guess the military's design decisions. *See McKay v. Rockwell In-*

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3. In recent years, the military's need to "push technology towards its limits" has resulted in dramatic new weapons systems, such as the cruise missile and aircraft capable of vertical take-off and landing. Other weapons systems currently under consideration and development, such as the highly publicized Strategic Defense Initiative, or "Star Wars" program, and the "Stealth" bomber, will continue to expand the boundaries of technology.

ternational Corp., 704 F.2d at 449; *Koutsoubos v. Boeing Vertol*, 755 F.2d 352, 354-55 (3d Cir.), *cert. denied*, 106 S. Ct. 72 (1985); *Tillett v. J.I. Case*, 756 F.2d 591, 597 (7th Cir. 1985); *In Re Air Crash Disaster at Mannheim, Germany*, 769 F.2d 115, 121 (3d Cir. 1985), *cert. denied*, 106 S. Ct. 851 (1986); *Bynum v. FMC Corp.*, 770 F.2d 556, 565 (5th Cir. 1985); *Shaw v. Grumman Aerospace Corp.*, 778 F.2d at 742. In essence, these cases rest upon the recognition that "[t]he complex, subtle, and professional decisions as to the composition, training, equipping, and control of a military force are essentially professional military judgments, subject *always* to civilian control of the Legislative and Executive Branches." *Gilligan v. Morgan*, 413 U.S. 1, 10 (1973) (emphasis original); *see also Rostker v. Goldberg*, 453 U.S. 57, 64-66 (1981).[4] Indeed, the Eleventh Circuit's decision in this case recognizes that the military contractor defense is based on the fact that "the military must be free to decide that the risk of accident or injury to servicemen from a design defect in the equipment it orders is a risk that it is willing to take—without judicial interference." *Shaw*, 778 F.2d at 742.

Yet, while the Eleventh Circuit recognized the existence of the military contractor defense, it "frame[d] that defense and the rationale behind it somewhat differently from other circuits that have considered this question." *Id.* at 738. Rather than adopting the standard for the defense that was initially developed by the Ninth Circuit in *McKay*, and subsequently adopted in large part by the Third, Fifth, and Seventh Circuits, the Eleventh Circuit elected to formulate a test that operates "to turn the as-

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4. In *Rostker*, this Court reaffirmed the broad deference to be afforded military decisions: "The case arises in the context of Congress' authority over national defense and military affairs, and perhaps in no other area has the Court accorded Congress greater deference." 453 U.S. at 64-65.

sumption behind the *McKay* test on its head." 778 F.2d at 746. As explained below, application of the *Shaw* test will necessarily result in subjective judicial evaluation of military decisions, in direct contrast with the standard adopted by other courts of appeals. (*See* Section II, *infra*).

This clear split among the courts of appeals as to the scope of the military contractor defense has national significance. Because of the critical importance of the timely development and advancement of weapons systems to the national defense, the federal courts have long recognized that "[t]he relationship between the Government and its suppliers of ordnance is . . . distinctively federal in character. . . ." *Stencel Aero Engineering Corp. v. United States*, 431 U.S. 666, 672 (1977). The national scope of our defense effort means, of course, that weapons systems must be subject to deployment throughout the nation, and indeed throughout the world.

> The Armed Services perform a unique, nationwide function of protecting the security of the United States. To that end military authorities frequently move large numbers of men, and large quantities of equipment, from one end of the continent to the other, and beyond.

Stencel, 431 U.S. at 672.

As manufacturers of military weapons systems, such as the Grumman KA-6D aircraft[5] involved in this case, amici work closely with the United States military in developing and designing weapons systems that are critical to our national defense efforts. In this regard, amici deal with *national* representatives and work to meet *national* needs, not localized concerns. In his recent State

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5. The KA-6D is the tanker version of the U.S. Navy's A-6 jet attack aircraft weapons system.

of the Union Address, President Reagan recognized this "distinctively federal" nature of national defense:

> Defense is not just another budget expense. Keeping America strong, free, and at peace *is solely the responsibility of the Federal Government;* it is Government's prime responsibility.

132 *Cong. Rec.* 14,321 (1986) (emphasis added).

The Grumman A-6 jet attack aircraft exemplifies the extremely broad-based national considerations that affect the design of weapons systems. The military mission statement for the A-6 required an "all-weather, low-altitude, carrier-based, attack airplane" capable of meeting "U.S. Navy design criteria . . . for use in arctic and cold weather as well as tropic and desert areas." (R. 334).[6] Further, after a weapons system is manufactured and delivered to the military, the weapons system must be available for use wherever the military determines that it is required. The A-6, for example, has seen service everywhere that the United States Navy's aircraft carriers patrol, including extensive service in Vietnam. Most recently, the A-6 family of aircraft "played vital roles throughout the engagement" in the Gulf of Sidra.[7]

Under these facts, "it makes no sense to permit the fortuity of the situs" of an accident to affect the liability of a contractor to an injured serviceman. *Stencel Aero Engineering Corp. v. United States,* 431 U.S. at 672; *see Feres v. United States,* 340 U.S. 135, 143 (1950). Weapons

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6. Citations to the Record on Appeal before the Eleventh Circuit are denoted "R. ....." and citations to the trial transcript are denoted "T. ....."

7. "Navy Used New Electronic Tactics on Libya That Protected Pilots," *New York Times,* Mar. 28, 1986, at 6, col. 1 (national ed.).

systems are created to meet national needs and are designed in accordance with national standards set by the United States military. Justice requires that a national standard should also be employed in determining whether a military contractor should be insulated from liability for design defects in weapons systems approved and selected for use by the United States military.

Beyond this, however, lie the needs of national defense. It simply makes no sense to allow varying judicial standards for application of the military contractor defense to influence the development, design and advancement of weapons systems required by the military. Faced with varying standards, manufacturers of weapons systems will be forced to adjust their conduct to meet the most restrictive test to which they might be subjected, a result that will seriously impede national defense. For example, meeting the Eleventh Circuit's test for the military contractor defense would require amici *either* to refuse to participate in the design of weapons systems[8] *or* to question the military's stated needs and the expertise of military officers to make or approve design decisions.[9] Obviously, either result would greatly erode the relationship between the military and the manufacturers of weapons systems and would thereby impede the development, design, and advancement of new weapons systems. Thus, because of the national importance of the issues raised by the decision below and the need for a uniform standard for the military contractor defense, this Court should grant the Petition.

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8. While the *Shaw* test would theoretically allow "minimal" participation in the design of a weapons system, a military contractor could never know what level of participation would meet this test.

9. *See* Section II, *infra*.

II. THE SHAW TEST FOR THE MILITARY CONTRACTOR DEFENSE IS UNWORKABLE AND VIOLATES THE SEPARATION OF POWERS DOCTRINE.

The development of sophisticated weapons systems to maintain and improve our national defense requires the active participation of amici in design decisions.[10] The Eleventh Circuit's decision threatens this participation and, thereby, will retard technological improvements in weapons systems. Moreover, the Eleventh Circuit's decision injects the judiciary directly into the process of evaluating the wisdom of military decisions and thereby violates the doctrine of separation of powers.

In its opinion below, the Eleventh Circuit established a radical and unworkable test for application of the military contractor defense:

> A contractor may escape liability only if it affirmatively proves: (1) that it did not participate, or participated only minimally, in the design of those products or parts of products shown to be defective; *or* (2) that it timely warned the military of the risks of the design and notified it of alternative designs reasonably known by the contractor, *and* that the military, although forewarned, clearly authorized the contractor to proceed with the dangerous design.

778 F.2d at 746 (emphasis original). The first element of this test simply ignores the reality of modern weapons systems development, design, and procurement. The sec-

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10. The government's Strategic Defense Initiative, for example, contemplates detailed cooperation between private industry and the United States military in many areas, including laser technology, microwave devices, computer software and hardware, and other areas.

ond element requires precisely the type of detailed judicial evaluations of military determinations that the separation of powers doctrine prohibits.

The requirement that a contractor demonstrate that "it did not participate, or participated only minimally," in the design of a weapons system ignores the way in which a modern weapons system is typically designed and procured. A sophisticated weapons system evolves as the result of a "continuous back-and-forth" between the contractor and the military service. *See Koutsoubos v. Boeing Vertol,* 755 F.2d 352, 355 (3d Cir.), *cert. denied,* 106 S. Ct. 72 (1985). The exchange of concepts, proposals, drawings, test results, and in-service experience between the military and the contractor throughout the design process is essential if the new system is to mesh the latest technology with the needs of the military.

The record in this case reflects the process that is typical of the evolution of an effective and sophisticated weapons system. That process generally includes the following steps:

(1) *Proposal phase*: The military recognizes its need for a new weapons system and provides operational requirements for a proposed system. (T.III-4). After interested contractors submit proposals (including technical and performance information, cost estimates, and production schedules), the military selects one contractor to continue. (T.III-4-5).

(2) *Precontract phase*: The contractor and the military agree upon the detail specifications for the weapons system (T.III-6) and upon the tests by which the weapons system is to be evaluated.

(T.III-11). The contractor may not deviate from the approved spscifications without the express permission of the military. (T.III-12).

(3) *Postcontract phase*: The contractor submits schematic and detail drawings identifying every part to be used in the weapons system and reflecting the proposed assembly, installation, and operation of the system. (T.III-12-14). The military reviews the drawings and either approves the plans or requires changes. (T.III-17).

(4) *Production and testing of prototypes*: After approval of the plans, several prototypes of the weapons system are produced for testing and evaluation. (T.III-18-19). If the prototypes do not pass all tests, the contractor and the military review any areas of deficiency and decide upon the changes to be incorporated in the production contract. (T.III-20). The military is the final arbiter of whether the weapons system complies with the specifications and whether it will be accepted for service. (T.III-120, 137).

(5) *Production and deployment*: The weapons system enters active production and, after acceptance by the military, is placed into service.

In summary, the development of a modern weapons system requires a "continuous back-and-forth" between the military and the manufacturer, a process that is vital to insuring that the military mission of the weapons system is realized. Not only does the first element of the *Shaw* test overlook the importance of this detailed interaction, but, more importantly, it actually provides a direct incentive for manufacturers not to participate in the design process, a result that would unquestionably harm

the nation's defense by requiring the military to perform all design functions by itself.

The second element of the *Shaw* test is even more dangerous than the first. The Eleventh Circuit's test does not contemplate an *objective* test for determining whether the military in fact approved the design after learning of design risks. Instead, the Eleventh Circuit expressly held that "[a]uthorization . . . must be knowing", 778 F.2d at 746, and that a "blanket product approval from the government" is not sufficient. *Id.* at 746 n. 18. Indeed, the Eleventh Circuit stated that "the court may take into account evidence that goes to the military's own level of relevant knowledge and expertise." *Id.* at 746.

Thus, the Eleventh Circuit's test would require a district court to evaluate not only whether the military *actually* approved a weapons system's design but also whether it *should have* approved the design at all. If the court considers a design defective, it can simply disregard the *fact* of military approval by concluding that the military lacked sufficient knowledge and expertise to make a "knowing" assessment of the risks. Indeed, in this case, the Eleventh Circuit used this very test to decide that "the Navy did not have sufficient expertise" to appreciate the risks involved in the flight control system of the Grumman A-6. *Shaw*, 778 F.2d at 747.

The practical implications of this test are staggering. A contractor asserting the military contractor defense under the *Shaw* test will be required to prove not only that the military approved a design, but also that the military's representatives were in fact competent to give such approval. On the other hand, the plaintiff—an injured serviceman or his representative—is provided with a direct incentive to challenge the "military's own level of rele-

vant knowledge and expertise" in order to invalidate approval of the design. *See Id.* at 746.

The specter of military officers being called into a civilian court and subjected to detailed cross-examination as to their "relevant knowledge and expertise" regarding design decisions is certainly not contemplated by the Constitution. Indeed, this Court has recognized that "[t]he military constitutes a specialized community governed by a separate discipline from that of the civilian," and that "[o]rderly government requires that the judiciary be as scrupulous not to interfere with legitimate Army matters as the Army must be scrupulous not to intervene in judicial matters." *Orloff v. Willoughby,* 345 U.S. 83, 94 (1953). Under the Eleventh Circuit's test, however, this type of detailed examination of military officers is encouraged and the civilian courts would be placed in precisely the role of second-guessing military judgments that is precluded by the separation of powers doctrine. As this Court reaffirmed in *United States v. Shearer,* 105 S. Ct. 3039 (1985):

> To permit this type of suit would mean that commanding officers would have to stand prepared to convince a civilian court of the wisdom of a wide range of military and disciplinary decisions . . . . But as we noted in *Chappell v. Wallace,* such " 'complex, subtle, and professional decisions as to the composition, training, [equipping,] and control of a military force are essentially professional military judgments.' "

105 S. Ct. at 3044 (quoting *Chappell v. Wallace,* 462 U.S. 296, 302 (1983), and *Gilligan v. Morgan,* 413 U.S. 1, 10 (1973)). *Shearer* held that, even though the action there did not involve broad military policy, it was among "the *type* of claims that, if generally permitted, would involve

the judiciary in sensitive military affairs at the expense of military discipline and effectiveness." *Id.* (Emphasis original). Challenges to the design of a weapons system also involve decisions of command, and the Eleventh Circuit's test for the military contractor defense virtually mandates that the federal courts invade this uniquely military province.

The *Shaw* test is also flawed because it focuses on whether the contractor advised the military about risks and design alternatives that "reasonably ought to be known given good design practice in the industry." *Shaw*, 778 F.2d at 746. Through this test the Eleventh Circuit again shifts the focus of inquiry away from the objective standards of whether the military in fact approved the design and whether the contractor in fact advised the military of dangers that were actually known to it. Instead, the focus becomes a subjective test of whether the contractor *should have* known of dangers and alternative designs and whether the military *should have* been given this knowledge. As stated earlier, in making this determination the trial court is empowered to consider the military's own level of knoweldge and expertise in assessing "[w]hether the contractor's counsel on these matters is sufficiently specific and complete to permit an informed decision on the part of the military . . . ." *Id.* Thus, the court would be forced to reconstruct the military chain of command and decision-making process for design decisions that may have occurred many years before.[11]

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11. The Grumman A-6 was designed in the late 1950's. The trial in the district court occurred in 1983. The United States Navy is continuing to order the A-6 for use in 1986 and has requested funds for additional purchases in 1987. "Fiscal 1987 Major Weapon System Spending Detailed by Military Services", *Aviation Week & Space Technology*, Feb. 17, 1986, at 116.

It is, of course, no answer to this judicial intrusion into military affairs to assert, as the Eleventh Circuit did in its opinion below, that the courts will not violate the separation of powers doctrine in applying the *Shaw* test. The military chooses its weapons systems subject to the review and approval of the Executive Branch and Congress. To allow judicial review of these military judgments through the guise of assessing the "relevant knowledge and expertise" of the military is inconsistent with the constitutional separation of powers doctrine. In *Rostker v. Goldberg*, 453 U.S. 57 (1981), this Court explained:

> Although the District Court stressed that it was not intruding on military questions, its opinion was based on assessments of military need and flexibility in a time of mobilization. . . . It would be blinking reality to say that our precedents requiring deference to Congress in military affairs are not implicated by the present case.

Id. at 68-69 (citation and footnote omitted). In the present case, the lip service that is paid to the separation of powers doctrine in the *Shaw* decision is belied by the very test that the *Shaw* opinion adopts for the military contractor defense.

In summary, the test for the military contractor defense articulated in *Shaw* runs contrary to the principles of separation of powers. Rather than insuring that the military will "be free to decide that the risk of accident or injury from a design defect in the equipment it orders is a risk that it is willing to take—without judicial interference," 778 F.2d at 742, the *Shaw* test directly injects the judiciary into that military decision-making process.

CONCLUSION

The design of military weapons systems is a matter of national significance and should be governed by a uniform national standard. The decision of the Eleventh Circuit not only creates a deep rift in the circuits on the standard for the military contractor defense, but also undermines the separation of powers doctrine on which the defense primarily rests. Amici respectfully submit that, for these reasons, the Petition for Writ of Certiorari should be granted.

Respectfully submitted,

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APPENDIX

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Wyle Laboratories
Yipkon Corp.
Zimmerman Associates, Inc.